''A CLINICAL STUDY ON EFFECTIVENESS OF HOMOEOPATHIC MEDICINE ON OSTEOARTHRITIS OF KNEE USING ADL (ACTIVITIES OF DAILY LIVING) SCORE''

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT

FOR THE AWARD OF THE DEGREE OF

DOCTOR OF MEDICINE (HOMOEOPATHY)

IN

By

Dr. RAKENDU M.D

UNDER THE GUIDANCE OF

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SARADA KRISHNA HOMOEOPATHIC MEDICAL COLLEGE
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ENDORSEMENT BY THE HEAD OF THE DEPARTMENT AND THE INSTITUTION

This is to certify that the Dissertation entitled **''A CLINICAL STUDY ON EFFECTIVENESS OF HOMOEOPATHIC MEDICINE ON OSTEOARTHRITIS OF KNEE USING ADL (ACTIVITIES OF DAILY LIVING) SCORES "** is a bonafide work carried out by **Dr.RAKENDU M.D,** a student of M.D.(Hom.) in **DEPARTMENT OF PRACTICE OF MEDICINE** in the SARADA KRISHNA HOMOEOPATHIC MEDICAL COLLEGE under the supervision and guidance of **Dr.T. AJAYAN, M.D.(Hom.), HOD, Dept. of Practice of medicine** in partial fulfilment of the Regulations for the award of the Degree of **DOCTOR OF MEDICINE (HOMOEOPATHY)** in **PRACTICE OF MEDICINE.** This work confirms to the standards prescribed by THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI.

This has not been submitted in full or part for the award of any degree or diploma from any University.

Dr. T. AJAYAN ,M.D(Hom) **Dr. N.V.SUGATHAN, M.D(Hom.)**

HOD, Dept. of practice of medicine PRINCIPAL

Place: Kulasekharam

Date:

CERTIFICATE BY THE GUIDE

This is to certify that the Dissertation entitled **" A CLINICAL STUDY ON EFFECTIVENESS OF HOMOEOPATHIC MEDICINE ON OSTEOARTHRITIS OF KNEE USING ADL (ACTIVITIES OF DAILY LIVING) SCORES "** is a bonafide work of **Dr.RAKENDU M.D.** All her work has been carried out under my direct supervision and guidance. Her approach to the subject has been sincere, scientific and analytic. This work is recommended for the award of degree of **DOCTOR OF MEDICINE (HOMOEOPATHY)** in **PRACTICE OF MEDICINE** of THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY, CHENNAI.

Place: Kulasekharam

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DECLARATION

I, **Dr. RAKENDU M.D** do hereby declare that this Dissertation entitled **" A CLINICAL STUDY ON EFFECTIVENESS OF HOMOEOPATHIC MEDICINE ON OSTEOARTHRITIS OF KNEE USING ADL (ACTIVITIES OF DAILY LIVING) SCORES "** is a bonafide work carried out by me under the direct supervision and guidance of **Dr. T. AJAYAN, M.D. (Hom.)** HOD , Dept. of Practice of medicine, in partial fulfilment of the Regulations for the award of degree of **Doctor of Medicine (homoeopathy)** in **PRACTICE OF MEDICINE** of The Tamil Nadu Dr. M.G.R Medical University, Chennai. This has not been submitted in full or part for the award of any degree or diploma from any University.

Place:kulasekharam **Dr. RAKENDU M.D**

Date:

AIM:

This study was aimed to determine whether Homoeopathic medicine can improve the activities of daily living of a patient with ostheoarthritis of knee. .

MATERIALS AND METHODS:

A sample of 30 cases of age above 40 years suffering from osteoarthritis of knee were selected from the OPD/ IPD of Sarada Krishna Homoeopathic Medical College. Case details were recorded and were prescribed based on the totality of symptom. Case were followed up for a period of 12 months. Observations were recorded, before treatment scores were compared with after treatment scores . And paired ‘t’test was done to find out the effectiveness of Homoeopathic medicine in improving the activity of daily living.

RESULTS:

Out of 30 cases selected most prevalence noticed in females 21 (70%) cases. Of these most of them are housewives 18 (60%), bilateral involvement of knee joint was seen in 21 (70%) patients . Bryonia and Lycopodium are most indicated medicine in most number of cases follow. Regarding the outcome of treatment, out of 30 patient 23 patients shows improvement of their activities of daily living and also shows much relief from their pains.

CONCLUSION

The ADL scales used for assessing the effectiveness of treatment shows significant improvement after the treatment. From the statistical analysis of the above results shows that Homoeopathic drugs are effective in the treatment of knee osteoarthritis and also there is improvement in the activities of daily living of patients with ostheoarthritis of knee.

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With a devoted heart I thank ***Almighty God*** *whose grace strengthens me to complete this work with maximum involvement.*

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Dr.

RAKENDU M.D

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1.1 INTRODUCTION

Osteoarthritis is one among the most prevalent chronic arthritis and leading cause for pain and disability in most countries world wide. As the age advances the physical functions such as leg strength, balance and mobility of the leg joints decrease markedly. Pain is a key symptom in the decision to seek medical care and an important antecedent to disability. Because of its high prevalence and the frequent disability in the major weight bearing joints especially knee joint. Patient with osteoarthritis knee joint has more difficulty in doing their activities of daily living like climbing stairs and walking than any other disease .

Prevention of reduction in these physical function is crucial to allow the suffers to continue a healthy and independent daily life. Activities of daily living (ADLs) refers to people's daily self care activities. It is important to retain the ability to achieve ADLS at above a certain level to maintain an independent daily life. Each ADL has different difficulty. The difficulty exist from low activities to high activities. Studies show that the OA Knee patient with severe pain would find it more difficult to peform various ADLs including the low activities to high activities.

Among different leg joints, knee joint have the greatest load-bearing capacity and double the usual load of body weight is imposed on each knee joint when standing on one leg or when walking. Knee joints are important for achieving independence in ADLs. Recent years the number of people suffering from severe or mild knee pain has increased.

In India also osteoarthritis is the most prevalent form of arthritis, affecting over 15 million adults every year. And its come under top five prevalent diseases in India. In the last few decades, age group of 30-50 years are affecting. The rapid increase in the incidence suggests that osteoarthritis of knee joint has an growing impact on health care and public health in the future.

Osteoarthritis (OA), a chronic degenerative joint disease and is the most common type of arthritis. It is characterised by focal loss of articular hyaline cartilage with proliferation of new bone and remodelling of joint contour. It is best viewed as the dynamic repair process of synovial joint that may triggered by a variety of risk factors.

The patient's point of view regarding their health status has gained importance in decision making procedures and has been considered a possible criterion standard to assess treatment efficancy. Homoeopathy is a system of medicine with a holistic concept based on Law of similia and treat the patient as a whole. In Homoeopathy the indicated medicine is selected after the individualization of patient based on the totality of symptoms. Homoeopathic medicines are effective in managing chronic diseases and also can prevent the further progression of the disease in a most reliable and most harmless way.

1.2 NEED FOR THE STUDY

As per a recent report regarding OA, over 40% of Indian population in the age group of 70 year or above suffer from OA . And about 2% of these have severe knee pain and disability. A statement quoted by piramal health care limited in a nationwide campaign against chronic diseases, India is expected to be the chronic disease capital with 60 million people with arthritis, by 2025. The majority of those suffering from OA are deprived of access to quality treatment.

Incidence of osteoarthritis at outpatient (OPD) and in IPD of Sarada Krishna homoeopathic medical college are high. And the improvement after the administration of homoeopathic medicine are good. So from the present study it may review how homoeopathic medicines are effective in OA knee joint.

2.0 AIMS AND OBJECTIVES

- To know the role of homoeopathic medicine in the treatment of osteoarthritis of knee joint
- To know the most effective medicines in the treatment of OA Knee.

3. REVIEW OF LITERATURE:

3.1. DEFINITION OF OSTEOARTHRITIS

Osteoarthritis (OA), a chronic degenerative joint disease and is the most common type of arthritis. It is characterised by focal loss of articular hyaline cartilage with proliferation of new bone and remodelling of joint contour.[1] It is best viewed as the dynamic repair process of synovial joint that may triggered by a variety of risk factors.

3.2 NORMAL DEVELOPMENT OF KNEE

It develops between the 3rd and 4th fetal month. The secondary centres of ossification are formed for the distal femur at 6th and 9th fetal month and for the upper tibia between 8th fetal month and the first postnatal month. The patellar ossification center appears between the 2nd and 4th years in girls and the 3rd and 5th years in boys.[2]

3.3 ANATOMY OF KNEE JOINT

The knee is the largest joint in the body and is a modified hinge type of synovial joint that also permits some element of rotation. It consists of three joints merged into one; an intermediate one between the patella and the femur, and lateral and medial ones between the femoral and tibial condyles. This arrangement offers a fulcrum for the powerful extensor and flexor muscles that act on the joint during propulsion. A number of stabilizing factors counter the considerable biomechanical demands that are imposed upon the joint the most important. The major constraints of the knee are the medial and lateral collateral ligaments, the anterior and posterior cruciate ligaments, and the medial and lateral menisci. [3]

The blood supply involved are the superior, medial and inferio genicular branches of the popliteal artery, lateral circumflex femoral artery, circumflex fibular artery and anterior and posterior tibial recurrent artery. It is innervated by branches of femoral, tibial and common fibular nerves. [4]

3.4 TYPE OF JOINT

It is condylar synovial joint incorporating two condylar joint between the condyles of the femur and tibia, and a saddle joint between the femur and the patella. It is also a complex joint as the cavity is divided by the menisci.

ARTICULAR SURFACES

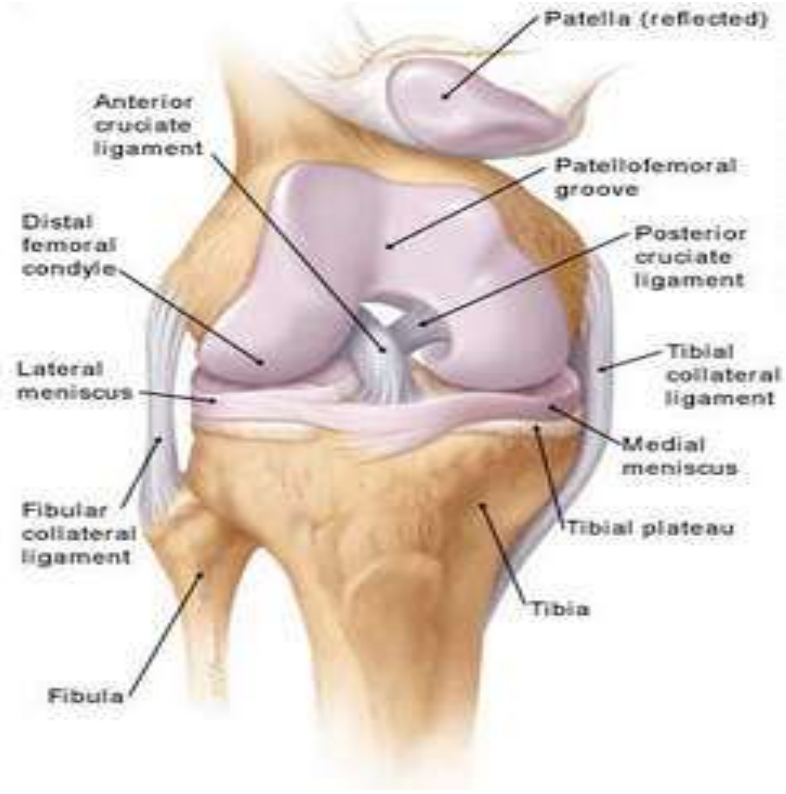
It is formed by

- The condyles of the femur
- The patella
- The condyles of the tibia

LIGAMENTS

The ligament of knee joints

- Fibrous capsule
- Ligamentum patellae
- Tibial collateral or medial ligament
- Fibular collateral or lateral ligament



- Oblique popliteal ligament
- Arcuate popliteal ligament
- Anterior cruciate ligament
- Posterior cruciate ligament
- Lateral meniscus
- Tranverse ligament

3.5 NORMAL RANGE OF MOTION

The fully extended knee is normally in the neutral position. The normal range of motion extends from neutral to about 140 degrees with most activities performed in the flexion arc of 0–70 degrees. Hyperextension of up to 10–15 degrees is considered normal.

3.6 EPIDEMIOLOGY:

The prevalence of OA rises with progression of age. Around 80 % of people above 65 years have radiographic evidence of OA, though only 25-30% are symptomatic. The knee and hip are the principal large joints involved, affecting 10-25% of those aged over 65 year.[5] Even for joints less frequently targeted by OA, such as the elbow or ankle, OA remains the most cause of arthritis.

Global statistics reveals over 100 million people worldwide suffer from osteoarthritis, which is the common cause of disability in the elder age groups. The osteoarthritis is the second most common joint disease with prevalence of 22% to 39% in India . In India nearly, 45% of women over the age of 65 years have symptoms while radiological evidence is found in 70% of those over 65 year. By 2013 knee OA cost $27 billion in health care expenditure. [6] The rapid increase in the incidence suggests that osteoarthritis of knee joint has an growing impact on health care and public health in the future.

3.7 AETIOLOGY

Factors which predispose primary osteoarthritis include age, genetic, metabolic disorders, idiopathic avascular necrosis,[7] obesity.

Secondary osteoarthritis causes includes, trauma, mal-alignment, inadequate blood supply, infections of the joint, inflammatory diseases, nutritional bone diseases.[8]

3.8 PREDISPOSING FACTORS

- Obesity- obesity is an risk factor for developing OA in later years of life.[9] Three to six times body weight is exerted across the knee during single leg stance. It is not only a risk factor but also the obese person have more severe symptoms from the disease.

- Hereditary – familian tendency to develop nodal and generalized OA. Twin studies suggest a strong hereditary element underlying osteoarthritis, detail studies may reveal genetic markers for osteoarthritis. The influence of genetic factors is about 35-65% .

- Gender – polyarticular OA is more common in female, a higher prevalence after the menopause suggest a role for a sex hormone.

- Hypermobility- increased range of joint motion and reduced stability lead to OA.

- Trauma- meniscal and cruciate ligament tears caused stability lead to OA knee.

- Osteoporosis – there is reduced risk of osteoarthritis. In caucasion population there is inverse relationship between the risk of developing osteoarthritis and osteoporosis

- Joint congruity – congenital dislocation of the joint or a slipped femoral epiphysis or pethes' disease, osteonecrosis of the femoral head in children and adolescents causes early onset of osteoarthritis.

- Sports – repetitive use and injury in sports causes a high incidence of lower limb osteoarthritis. weight-bearing sports produce a two- to threefold increase in risk of OA of the hip and knee [10]

- Occupation –miners develop osteoarthritis of knee, hip and shoulder.

- Vitamins- Many studies suggested that a high intake of vitamin C and other antioxidants reduce the risk of osteoarthritis. The lack of antioxidants thought to be contribute to many ageing process

3.9 PATHOGENESIS

Focal destruction of the articular cartilage is most common pathological feature. The spectrum of OA ranges from the atopic disease in which the articular cartilage destruction occurs without any subchondral bone response, to hypertrophic disease in which there is massive new bone formation at the joint margin.

Cartilage is smooth-surfaced and shock-absorbing matrix of collagen fibres. It enclosing a mixture of proteoglycans and water. Proteoglycan present mainly as large molecular aggrecans, which consist of a protein core and it is attached with chondrotin sulphate and keratin sulphate chains.

Under normal circumstance there is a dynamic balance between the cartilage degradation by wear and its production by chondrocytes .[11] Early in the development of OA the balance between the cartilage degradation by wear and the production by chondrocytes is lost and despite increased synthesis of extracellular matrix, the cartilage becomes odematous. Focal erosion of cartilage develops. Chondrocytes die and the process is disorder although the repair is attempted from the adjacent cartilage. Matrix loss is caused by the action of matrix metalloproteinases such as collagenase (MMP-1) and stromelysin (MMP-3). These are secreted by chondrocytes in inactive form. Extracellular activation then leads to the degradation of collagen and proteoglycans.[12]

Eventually the synthesis of extracellular matrix fails and the surface becomes fibrillated and fissured. Cartilage ulceration exposes underlying bone to increased stress, producing microfractures and cysts. The bone attempts to repair but the production of abnormal sclerotic subchondral bone and overgrowths at the joint margin called osteophyte. Vascular endothelial growth from macrophages is a potent stimulator of angiogenesis and may contribute to inflammation and neovasularisation in OA.

3.10 CLINICAL FEATURES

The main presenting symptoms are

a. Pain

- Age > 45ys
- Insidious onset over months or years.
- Mainly related to movement and weight-bearing relieved by rest
- Only brief morning stiffness (<15 mins)
- Usually only one or a few joints painful.[13]

Pain is directly relate to the increased pressure in subchondral bone, which causes night pain, trabecular microfractures, capsular distension and low-grade synovitis or due to bursitis. Joint pain from osteoarthritis is activity-related. Pain comes on after the use of joints and then gradually resolves. Pain occurs during walking and going up or down stairs. Pain affect very aspect of a person's daily life and their quality of life and they cannot perform their major activities of daily living. Levels of pain and disability are greatly influenced by the patient's personality, levels of anxiety, depression, and activity and often do not correlate well with clinical signs.

b.Stiffness of the affected joint may be prominent, but morning stiffness is usually less than 30 min.

c. Functional restriction is an greater problem than pain.

d.Limbing

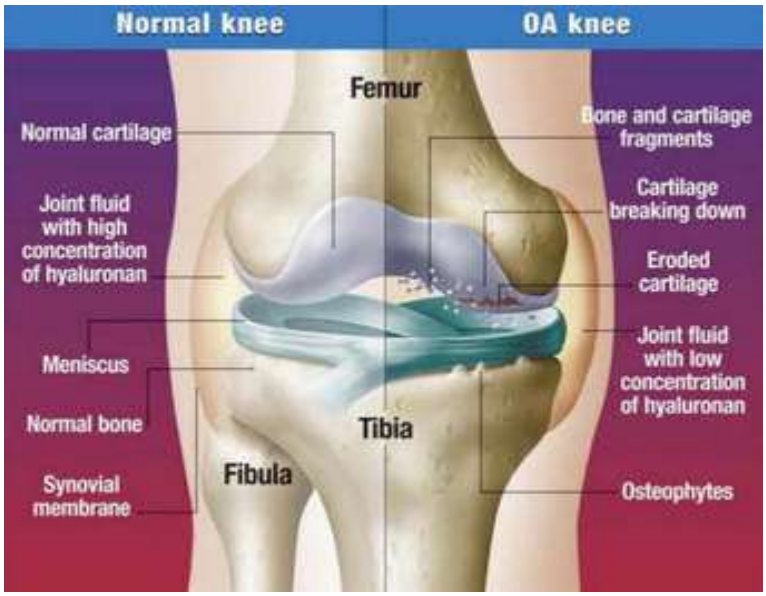
e. A jerky, antalgic gait

f. Posterior knee pain suggest a complicating popliteal cyst

g. In the knee, buckling occur, due to weakness of muscles crossing the joint.

Clinical signs

Restricted movement due to capsular thickening or blocking by osteophyte. Bony swelling (osteophyte) around joint margins. Palpable coarse crepitus due to rough articular surfaces. Deformity, usually without instability, less commonly vagus or fixed flexion deformity. Joint-line or periarticular tenderness. Muscle weakness, wasting, Bony tendeness. No or only mild synovitis (effusion, increased warmth)



3.11 INVESTIGATIONS[14]

a. On Examination – the characteristic stiffness and restriction of motion may noticed. Crepitus may felt during the movement .[15]

b. BLOOD TEST: There is no specific test, the ESR and CRP is normal. Rheumatoid factor and antinuclear antibodies are negative.

c. X-RAY OF KNEE JOINT

X-ray shows

- diminution of joint space at the pressure areas
- osteosclerosis
- small cysts near the articular surfaces
- osteophytes at the margins of joints
- loose bodies within the joint

No blood tests are routinely indicated. The ESR, CRP are normal in OA. The synovial fluid is non inflammatory.[16]

d. MRI: It is a special investigation which demonstrates meniscal tears, early cartilage injury and subchondral bone changes. The capability of MRI to visualize structural lesions and the osteophytes within the knee joint is greater.

e. Arthroscopy : reveals early fissuring and surface erosion of the cartilage.[17]

f. Aspiration of synovial fluid: (if there is a painful effusion) shows a viscous fluid with few leucocytes and occasionally calcium pyrophosphate crystal.

3.12 MANAGEMENT

The guiding principle is to treat the symptoms and disability not the radiological appearance. Education of the individual about the disease and its effects reduces pain, distress and disability. Psychological or social factors alter the impact of disease.[18]

PHYSICAL MEASURES

Weight loss and exercises for strength and stability are useful. Hydrotherapy, local heat, ice packs, massage. Insoles for shoes and walking stick held on the contralateral side to the affected lower joint are useful.[19] Maintaining normal vitamin D level may reduce the occurrence and progression of ostheoarthritis. Pain with mild to moderate osteoarthritis of the knee should practicipate in regular exercise program like supervised walking program, hydrotherapy classes.[20]

SURGERY

Total knee replacement provide excellent symptomatic and functional improvement when the involvement of the joint restricts walking or causes pain at rest, particularly at night. The safety of knee and hip replacement is now equal, with a complication rate of about 1%. Arthroscopic surgery for knee osteoarthritis is ineffective.[21]

3.13 ACTIVITIES OF DAILY LIVING (ADLs)

Activities of daily living (ADLs or ADL) is a term used in healthcare system to refer to people's daily self care activities. ADL are a series of basic activities performed by individuals on a daily basis necessary for independent living at home or in a society. There are 5 basic categories

- Personal hygiene- bathing/ showering, grooming, nail and oral care.
- Dressing – the ability to make appropriate clothing decisions and physically dress/undress oneself.
- Eating – the ability to fed oneself, though not necessarily the capability to prepare food

- Maintaining continence – both the mental and physical capacity to use a rest room including the ability to get on and off the toilet.

- Mobility- moving oneself from seated to standing, getting in and out of bed and ability to walk independently from one location to another location.

The activities of daily living is a most appropriate instrument to assess functional status as a measurement of the client's ability to perform his day to day activities

3.14 HOMOEOPATHIC APPROACH

According to Hahnemannian Classification of Diseases. These diseases are due to the disturbance of vital force by miasmatic forces. The true, natural, chronic diseases are those that arise from a chronic miasm. When left to themselves these disease go on increasing.

In aphorism 72 mention about chronic diseases, they are diseases of such a character that, with small, often imperceptible beginnings, dynamically derange the living organism, and during their progress are imperfect, unsuitable, useless resistance, but unable of itself to extinguish them, but abnormally deranged until at length the organism is destroyed, these are termed chronic diseases. They are caused by infection with a chronic miasm.[22]

The fundamental rule in the treatment of chronic diseases: to let the action of the remedy, selected in a mode homeopathically appropriate to the case of disease which has been carefully investigated as to its symptoms, come to an undisturbed conclusion so long as it is visibly advances the cure and while improvement still perceptibly progress.[23] Homoeopathy is applicable in every curable cases , but the thing is to know how to apply it.[24]

The true chronic disease are those arise from a chronic miasm. According to P.N banerjee the nature of presenting symptoms of joint affection in various miasms as follows.

Psora – Rheumatism functional inflammatory in nature without gross structural changes are present. Numbness and tingling sensation present when lying lightly on a part or when sitting cross legged. Complaints aggravates during winter. Amelioration by warmth.

Sycosis- Joints sprains easily while walking. Stiffness, soreness and lameness are sycosis. Pains stitching, pulsating, shooting, tearing and wandering in nature. Complaints aggravates during approach of storm, damp weather, beginning to move. Amelioration by motion, rubbing, pressure.

Syphilis – Joints are weak and patient stumbles while walking and falls easily. Pain like burning, bursting and tearing sensation. Complaints aggravates during night, sunset to sun rise, movement, warmth. Better by motion and cold application. [25]

3.15 HOMOEOPATHIC THERAPEUTICS

BRYONIA

Bryonia prefers the right side, the evening and open air to manifests its action most markedly. Knee stiff and painful. Joints red, swollen, hot with stitches and tearing worse on least movement. Every spot is painful on pressure. Worse any motion, warmth, morning, hot weather, exertion, touch and better lying on painful side, pressure, rest, cold things.[26]

LYCOPODIUM:

Numbness also drawing and tearing in limbs, especially while at rest or at night. heaviness of arms. One foot hot the other cold. Profuse sweat of the feet. Pain come and go suddenly. Cannot lie on painful side. Right foot hot, left cold. Limbs go to sleep. Twitching and jerking.

Worse right side, from right to left, from above downward, 4 to 8 pm, bed. Warm application better by motion, after midnight, on getting cold, from being uncovered.[27]

LACHESIS:

The knee are dislocated, stiff and weak. Stinging in knee. Sensation of hot air throught knee joint.[28] Shortening of tendon. Worse after sleep, left side, in the spring, warm water bath, pressure. Better by warm application

CALCAREA CARB:

Sharp sticking, as if parts were wrenched or sprained. Cold damp feet, feel as if damp stockings were worn. Cold knees cramps in calves. Sour foot-sweat. Weakness of extremities. Swelling of joints especially knee. Feet feel cold and dead at night.

Worse from exertion; ascending, cold in every form, wet weather; during full moon ; standing. Better, dry climate and weather; lying on painful side.

PHYTOLACCA

Aching, soreness, restlessness, prostration are general symptoms guiding to phytolacca. Has a powerful effect on fibrous and osseous tissues, fasciea and muscle sheath. Pain fly like electric shocks. Shooting laminating, shifting rapidly. Pain like shocks. Pain like shocks. Pain in legs, patient dreads to get up. Exposure to damp, cold weather, night, motion, right side. Better warmth, dry weather, rest.[23]

NATRUM MUR:

Arms and legs, but especially knees, feel weak. Drawing pain in knees while sitting. Numbness and weakness of lower extremities. Coldness of legs with congestion to head,

chest and stomach. Worse about 10 am and lying down. Better by cold bath, lying on right side.

SEPIA:

Lower extremities lame and stiff, tension as if too short. Crackling in knee and stiffness[29] . Restleness in all limbs, twitching and jerkings night and day. Coldness of legs and feet. Better by pressure, hot applications, drawing limbs up, after sleep and by exercise.

RHUS TOXICODENDRON:

Hot painful swelling of joints. Tenderness above knee joint. A stitch across knee on standing up after sitting. A sticking fom outward in side of the knee, while walking. Stiffness, especially of knees and feet. Pain in right knee; aggravates when staining knee; often a cracking in joint when stretching limb; change of weather, specially storm or rain agg pain. On rising from chair, sudden and severe pain as from a sprain, at the insertion of ligamentum patella to tibia . amelioration by continous walking.[30]

Worse during sleep, cold, wet rainy weather and after rain, at night, during rest, drenching. Better warm, dry weather, motion, walking, change of position, rubbing, warm applications.

3.16 RESEARCHES IN HOMOEOPATHY RELATED TO OSTEOARTHRITIS OF KNEE

Effect of Homoeopathic treatment on Activity of Daily Living (ADL) in knee Osteoarthritis: A prospective observational study

This study done by the department of organon at Mohiwala, Maharasta. Investigate the effect of individualized homoeopathic medicines in improving ADL by reducing pain,

stiffness and limiting the disease progress. 131 consecutive patients with OA of knee were recruited and followed up for minimum period of twelve months.

Three trained homoeopathic physicians prescribed individualized homoeopathic similimum and the patient were evaluated for pain on WOMAC osteoarthritis index survey form measuring pain, stiffness and ADL. The pain was also measured on numerical pain rating scale for confirmation. 29% of patients found between the age group of 40 to 50 years. Maximum between the age of 51 and 60 years about 37%. 76.33% cases has bilateral knee OA.

Obesity was also found to be an aggravating factor for joint destruction. Arnica Montana, Rhus tox, Bryonia alba, Ruta and Belladonna were prescribed during acute episodes if condition did not improve within next 2 days of prescribing constitutional medicine. All the medicine are prescribed in 6C, 30C, and 200 C and to 1M according to the susceptibility of individual.

Conclusion: The conclusion of the study is homoeopathic medicine have potential to improve the ADL of OA patient by reducing pain and stiffness and limiting progress of the disease without any systemic effects . Also it can safely be employed as a comprehensive health care therapeutic[31]

Clinical trials of homoeopathy in osteoarthritis: a systematic review

A total of eight controlled clinical tails involving 1444 patients were included in the analysis. None of the student used individualized homoeopathy, rather tried complex homoeopathy and combination of medicine. Conclusion of the study shows that homoeopathic complexes have a clear advantage in the treatment of osteoarthritis.[32]

To evaluate the efficacy of homoeopathic medicine in management of osteoarthritis of knee

This study was done by Pankaj dave, Mehul trivedi professors from S.V.H.C&H, Bhavangar, Gujarat. Out of 2300 patients attending outdoor patient department 100 patient were selected. OA outcome scoring system is followed as baseline. The result of the study observed that Rhus tox tops the list among 6 medicine found to be prescribed. Bryonia precedes Rhus tox , then Calc flour then Caustium. Other are Calc carb and Kali carb.[33]

OTHER RESEARCHES RELATED TO OSTEOARTHRITIS OF KNEE

Use of self-report activities of daily living questionnaires in osteoarthritis [34]

Self report activities of daily living (ADL) questionnaires and traditional observer-reported physical measures were used to assess clinical status in a clinical trial involving patient with osteoarthritis of the knee. The observer-reported measures included pain on active motion, pain on passive motion, joint tenderness, joint swelling, joint crepitus, walking time and observer global assessment.

Self-report ADL questionnaires included scales to assess difficulty, dissatisfaction and pain in eight activities of daily living as well as a visual analog pain scale and patient global assessment. Significant correlations were seen between the observer-reported and self report questionnaire measures, indicating that both types of measures detect similar information.

The ADL scores are compare after 3 weeks of treatment. There is correlation between observer- reported physical measures and self-report in patients. The guidelines used in the study are based on ADL scores was done by comparing efficacy of two conventional medicine.

A cross sectional study on activities of daily living and its relationship with physical activity in patient with early and severe knee osteoarthritis .

Knee pain during activities of daily living and its relationship with physical activity in patient with early and severe knee osteoarthritis a cross-sectional patient with medial knee OA done by fukutani, aoyama .

Aim : The study aimed to investigate whether knee pain during various activities of daily living is associated with physical activity in patient with early and severe knee osteoarthritis. Knee pain during six ADLs (waking up in the morning, walking on a flat surface or bending to the floor or standing up was a probable limiting factor for physical activity in early and severe OA respectively. The participants consisted of 328 elderly females.

Conclusion: Regardless of the presence of absence of mild or severe knee pain, some ADLs are difficult to achieve, while others are easy. The elderly with severe knee pain find it difficult to achieve many ADLs. In addition, it is difficult for the elderly with mild and severe knee pain to ascend and descend stairs and to sit up.[35]

Weight Loss Reduces the Risk for Symptomatic Knee Osteoarthitis in Women : The Framingham Study

The Framingham study was based on a sample of defined population of these, 796 women were selected for the study they have recent onset of symptomatic knee osteoarthritis were compared with the women without disease. Historical weight was defined as baseline body mass index upto 12 years symptom onset. Change in body mass index was assessed at several intervals. They concluded that weight loss reduces the risk for symptomatic knee osteoarthritis in women.[36]

4.0 MATERIALS AND METHODS

STUDY SETTING:

A sample of 30 cases from the patients who are diagnosed as knee OA visiting OPD, IPD and Rural Health centers of Sarada Krishna Homoeopathic Medical College Hospital was taken for the study.

SELECTION OF SAMPLES:

Sample size : 30 cases

Sample technique : Convenient Sampling technique

METHODOLOGY

A sample of 30 cases of knee osteoarthritis from the OPD, IPD and Peripheral OPD centers of sarada Krishna Homoeopathic Medical College are selected by convenient sampling technique who were screened for Knee OA using X-ray Knee. The data will be collected based on the pre-structured case record format. Every changes in the quality of living before and after the treatment are assessed using ADL scores and compared patient self report with observer report physical measures and changes in pain before and after treatment are assess using verbal pain intensity scale. Assessment were done in every 3 week interval and the changes were recorded.

INCLUSION CRITERIA

- Both genders
- Age of the patient above 40 years

EXCLUSION CRITERIA

- Clients who undergone any ortho-surgical procedures.

- Clients who have X-Ray with mal formation of knee from diseases other than OA.
- Clients who are on pain medications

STUDY DESIGN:

The clinical study on Knee osteoarthritis carried out in OPD, IPD, and Peripheral centers of Sarada Krishna Homeopathic Medical College. The data were collected based on the pre-structured case record format. The changes in activities of daily living and the pain of every case were assessed based on the ADL Scores and compared patient self report with observer report physical measures. Pretest and post treatment analysis were done using ADL Scoring criteria. Post treatment analysis wee done in every 3 week for 3 to 6 month after administration of medicine.

INTERVENTION

- Case taking and medicine selection and administration according to homoeopathic principles.
- Pre post treatment analysis using ADL score criteria and Verbal pain intensity scale.

SELECTION OF TOOLS

- Pre-structured SKHMC case format
- ADLS scores
- Verbal pain intensity scale
- Repertory –radar-synthesis 9.1
- Homoeopathic repertory KENT
- Homoeopathic medicine for osteoarthritis of knee

BRIEF OF PROCEDURE:

Study subject selected by convenient sampling .30 cases of OA Knee diagnosed based on the x-ray knee were taken in detail and recorded in pre-structured case format. The case is then analysed and totality is erected. Evaluation of symptoms will be done followed by repertorisation and medicine is selected on the basis of material medica. Selection of potency and repetition of dose are under homoeopathic principles. Preassessment was done on the basis of ADL scores and post assessment had done within 3 to 6 month. Statistical analysis for the hypothesis had been done with paired t test

OUTCOME ASSESSMENT

Patients are assess the effectiveness of homoeopathic medicines in management

of OA knee joint using ADL Score as follows.

- Improved : relief of symptom. (0-30)
- No improvement : no relief of symptoms (above 31)
- Dropped out :cases which are left out during study period

DATA COLLECTION

By interview technique and observation (Case study, Physical examination). Investigations done wherever necessary. Recording has been done in pre-structured case format.

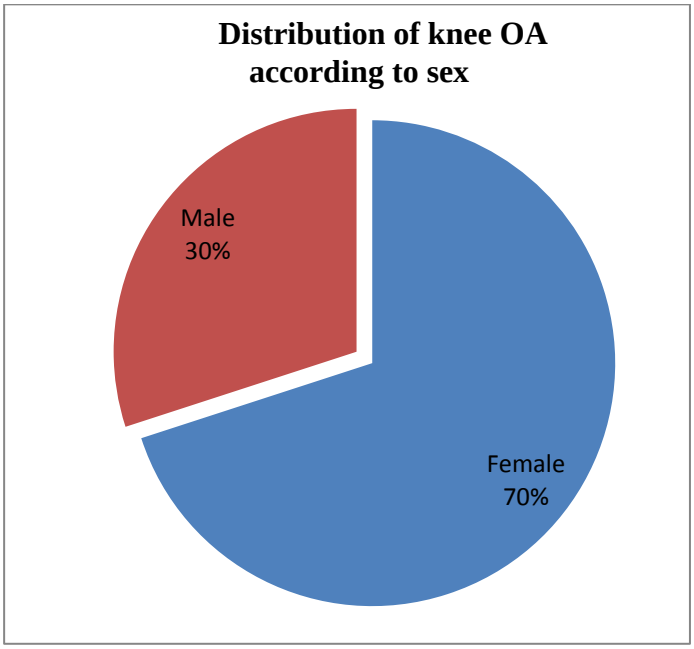
OBSERVATION AND RESULTS

The present study includes a sample of about 30 patient who a diagnosed to have knee OA. All these 30 cases were followed up for a period of 6 months were considered for the statistical study. The description of the data collected from 30 cases using tables and charts are described in these section.

5.1 DISTRIBUTION OF KNEE OA ACCORDING TO SEX

Table: 5. 1 Distribution of knee OA according to sex

SL.No	Sex	No.of Patients	Percentage
1.	Female	21	70
2.	Male	9	30

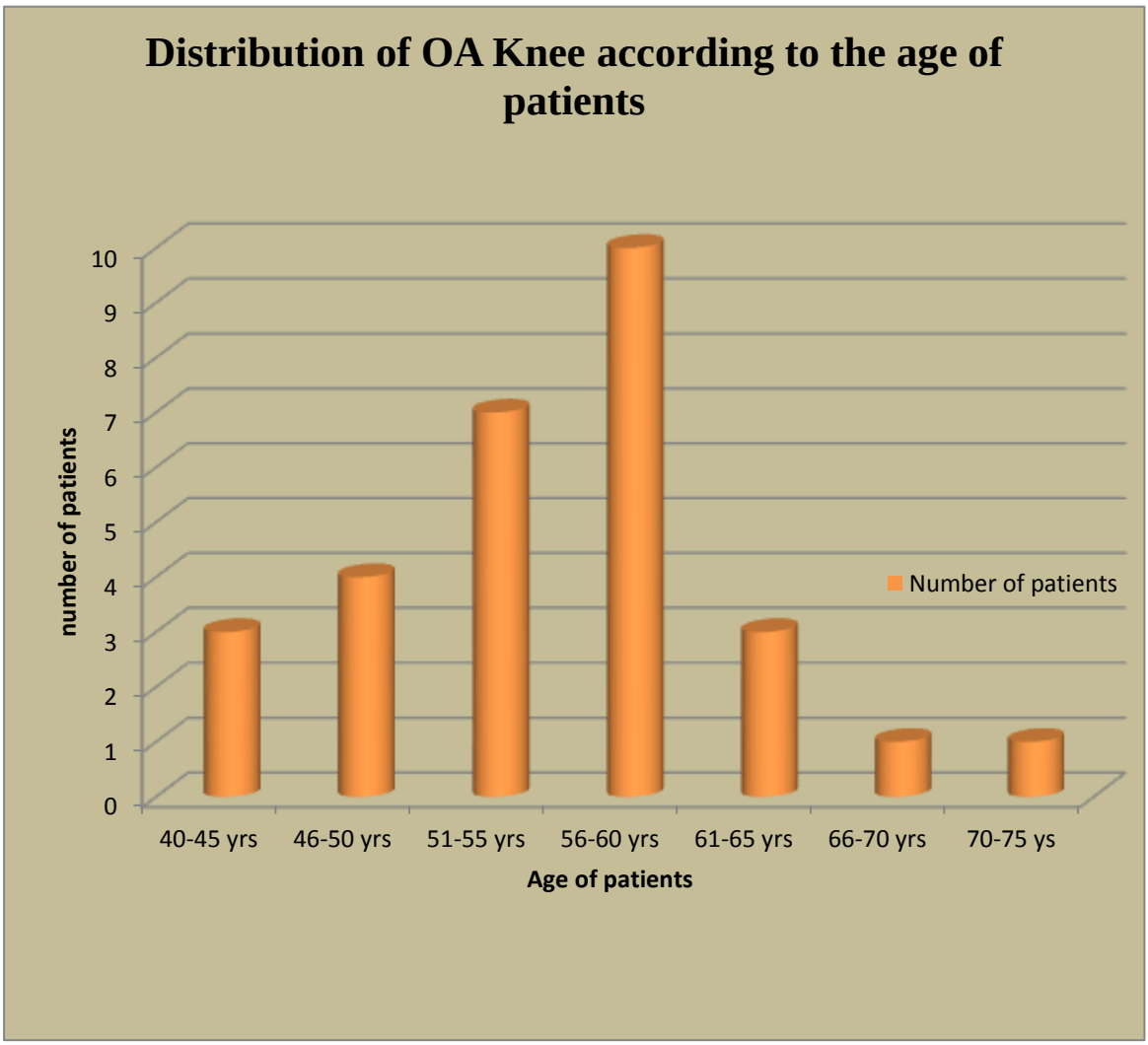


FINDINGS: The distribution of knee OA according to sex differentiation is 30% (9) in males and 70% (21) in females.

5.2 DISTRIBUTION OF KNEE OA ACCORDING TO AGE GROUP

TABLE 5.2 DISTRIBUTION OF KNEE OA ACCORDING TO AGE GROUP

Sl. No	Age group affected	No. of patients	Percentage
1.	40-45 yrs	3	10%
2.	46-50 yrs	4	13.33%
3.	51-55 yrs	7	23.33%
4.	56-60 yrs	10	33.33%
5.	61-65 yrs	3	10%
6.	66-70 yrs	1	3.33%
7.	70-75 ys	1	3.33%

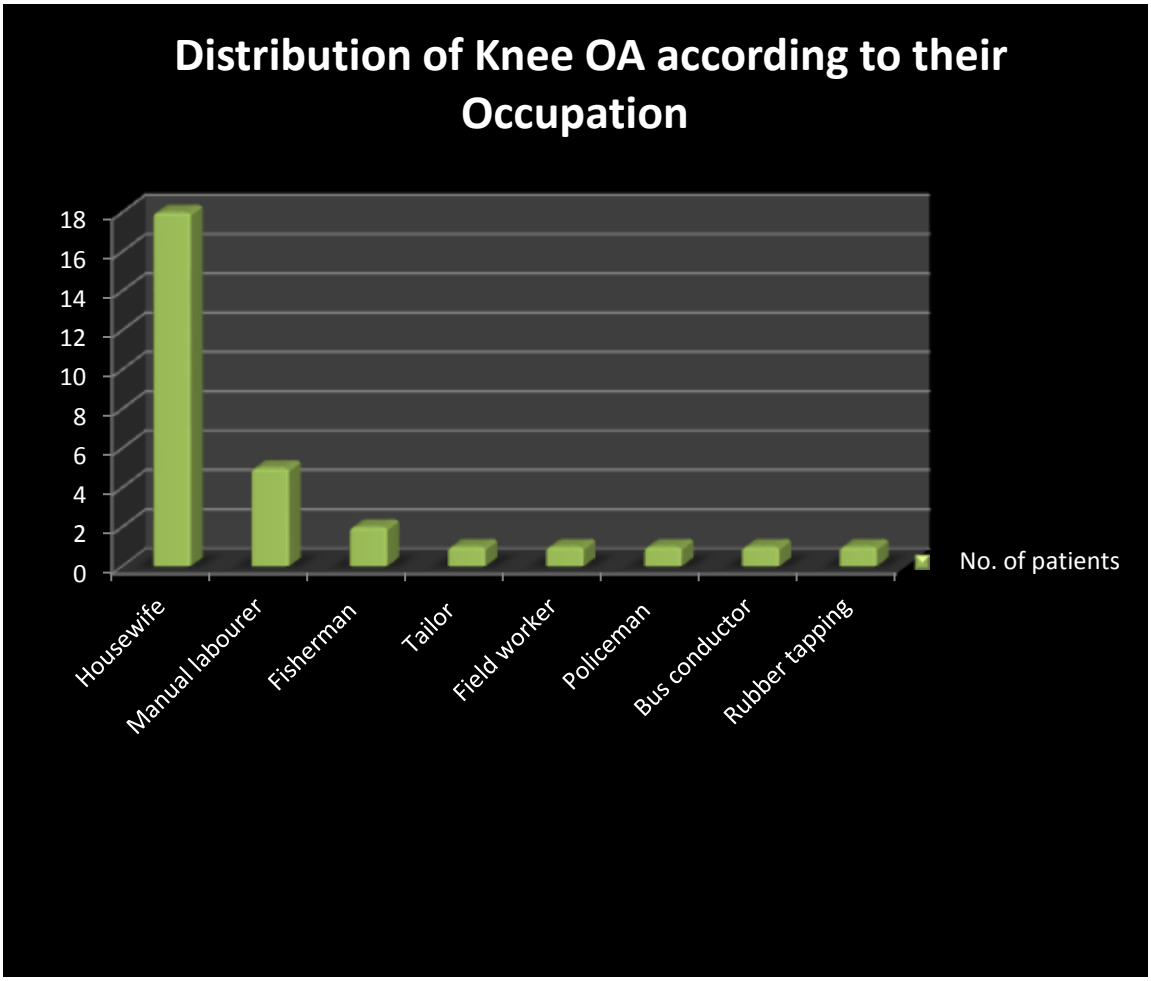


FINDINGS: Out of 30 patients 3 patients (10%) are between the age of 40 years to 45 years, 4 patients (13.33%) the age of 46 yrs to 50 ys. 7 patients (23.33%) are between the age of 51 yrs to 55 yrs. 10 patients (33.33%) between the age of 56 yrs to 60 yrs. 3 patients (10%) between the age of 61 yrs to 65 yrs, 1 patient between the age of 66 yrs to 70 yrs. And 1 patient comes under 70-75 yrs of age group.

5.3 DISTRIBUTION OF KNEE OA ACCORDING TO THEIR OCCUPATION

Table: 5.3 Distribution of Knee OA according to their occupation

SL.No	Occupation	No. of patients	Percentage
1.	Housewife	18	60%
2.	Manual labourer	5	16.66%
3.	Fisherman	2	6.66%
4.	Tailor	1	3.33%
5.	Field worker	1	3.33%
6.	Policeman	1	3.33%
7.	Bus conductor	1	3.33%
8.	Rubber tapping	1	3.33%



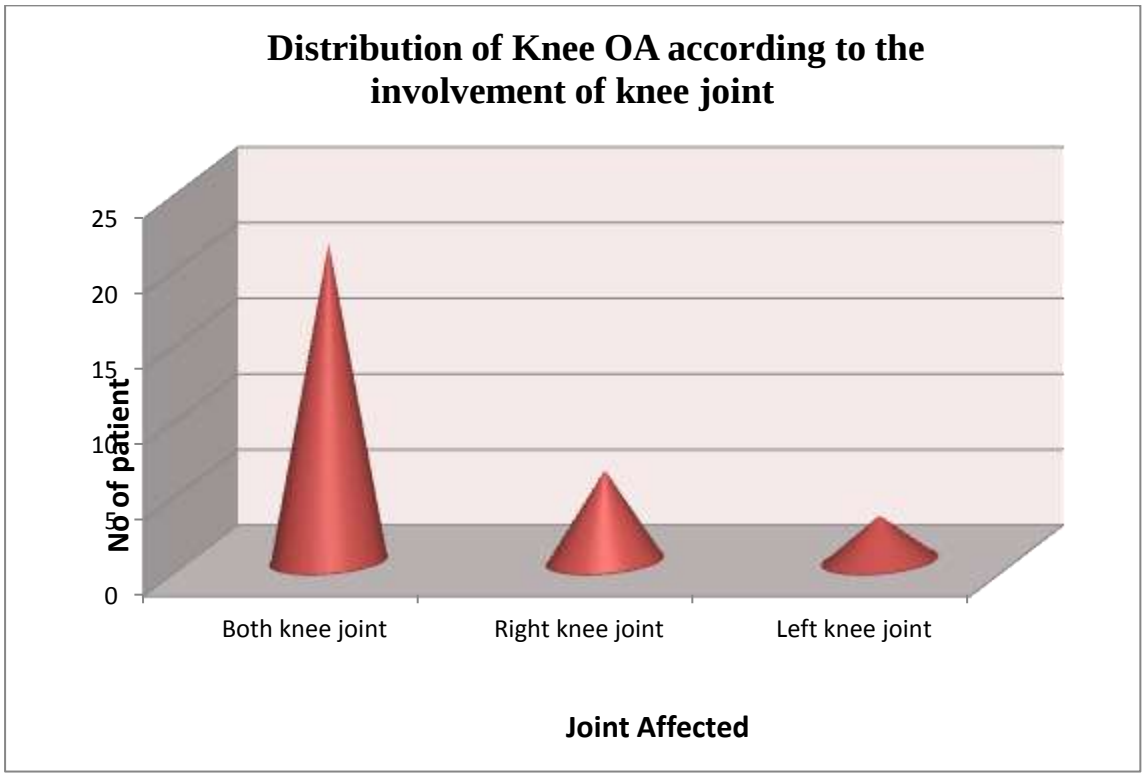
FINDINGS:

The distribution of Knee OA according to their occupation. Out of 30 cases, 60 % (18) belonged to housewives, 16.66% (5) belonged to the category of manual labourer, 6.66% (2) belonged to the category of fisherman, 3.33% (1) of rubbertapping, 3.33% (1) of tailor, 3.33% (1) of field worker, 3.33% (1) of policeman and 3.33% (1) of bus conductor.

5.4 DISTRIBUTION OF KNEE OA ACCORDING TO THE INVOLVEMENT OF KNEE JOINT

Table:5.4 Distribution of Knee OA according to the involvement of knee joint

SL.No	Knee Joint involved	No. of Patients	Percentage
1.	Both knee joint	21	70%
2.	Right knee joint	6	20%
3.	Left knee joint	3	10%

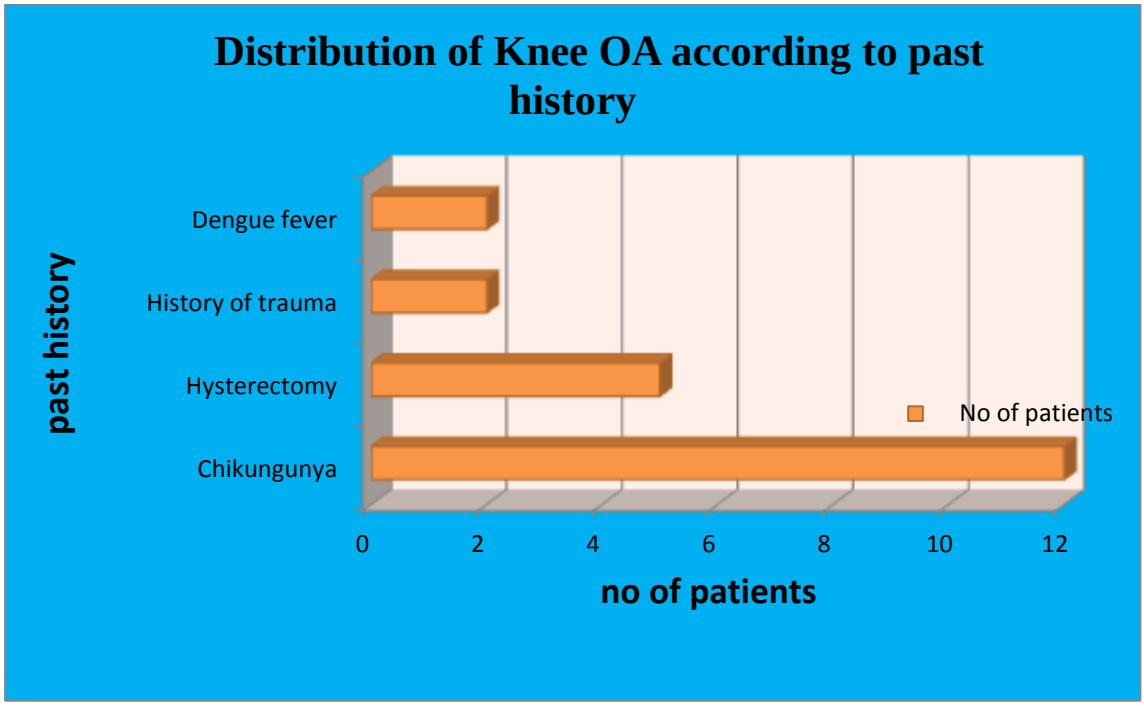


FINDINGS: The distribution of knee OA according to the involvement of knee joint. In 70 % (21) of cases affections seen in both knee joint, 20% (6) cases affections are seen in right knee joint and in 10% (3) cases affections seen in left knee joint.

5.5 DISTRIBUTION OF KNEE OA ACCORDING TO THE PAST HISTORY WHICH IS RELAVENT TO THE DISEASE.

Table: 5.5 Distribution of Knee OA according to past history which is relavent to the disease

SL.no	Past History	No of patients	Percentage
1.	Chikungunya	12	40%
2.	Hysterectomy	5	16.66%
3.	History of trauma	2	6.66%
4.	Dengue fever	2	6.66%

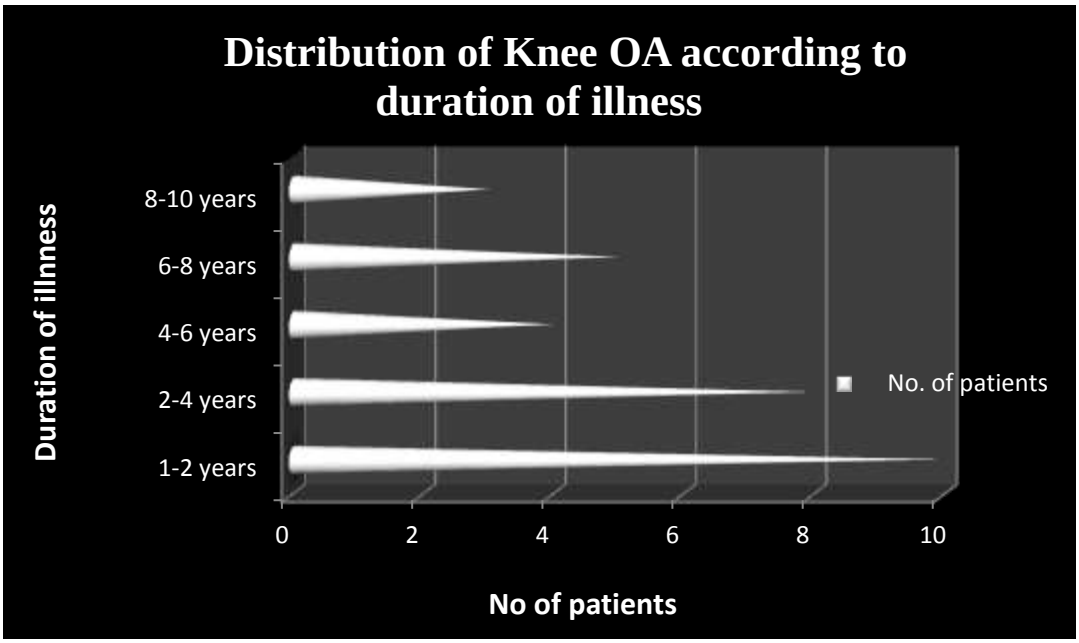


FINDINGS: The study shown that about out of 30 patient, 12 of them (40%) had a past history of chikungunya, 5 of them hysterectomy (16.66%) done. 2 of them about (6.66%) had history of trauma. 2 of them (6.66%) had history of dengue fever

5.6 DISTRIBUTION OF KNEE OA ACCORDING TO DURATION OF ILLNESS

Table: 5.6 Distribution of Knee OA according to duration of illness

Sl.no	Duration of illness	No. of patients	Percentage
1.	1-2 years	10	30%
2.	2-4 years	8	26.66%
3.	4-6 years	4	13.33%
4.	6-8 years	5	16.66%
5.	8-10 years	3	10%

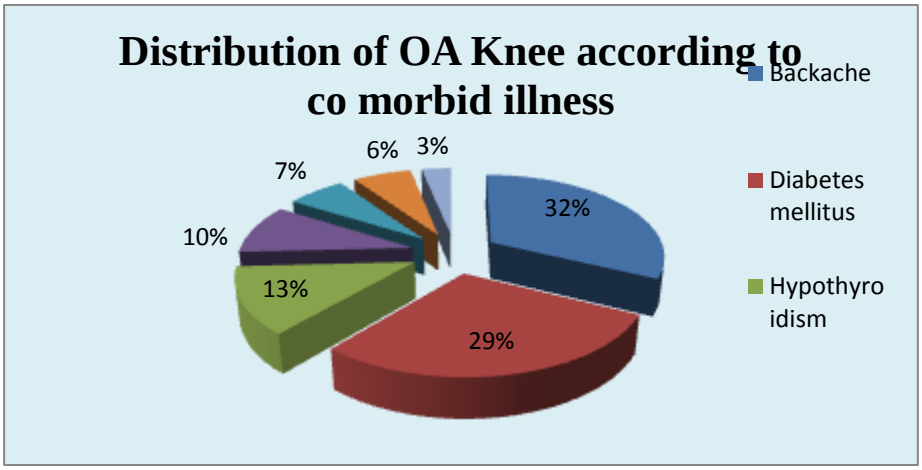


FINDINGS: Distribution of knee OA according to the duration of illness. Out of 30 patients 10 patients (30%) gave suffering history for 1-2 years. 8 patient (26.66%) gave history of illness for 2-4 years. 4 patient (13.33%) gave the suffering history for 4-6 years. And 5 patient (16.66%) have a duration of complaint for 6-8 years and remaining 3 patient (10%) had duration of 8-10 years.

5.7 DISTRIBUTION OF KNEE OA ACCORDING TO CO MORBID ILLNESS

Table :5.7 Distribution of Knee OA according to co morbid illness

Sl.no	Co morbid illness	No. of patients	Percentage
1.	Backache	10	33.33%
2.	Diabetes mellitus	9	30%
3.	Hypothyroidism	4	13.33%
4.	Hypertension	3	10%
5.	DM + hypothyroidism	2	6.66%
6.	Bronchial asthma	2	6.66%
7.	Gastritis	1	3.33%

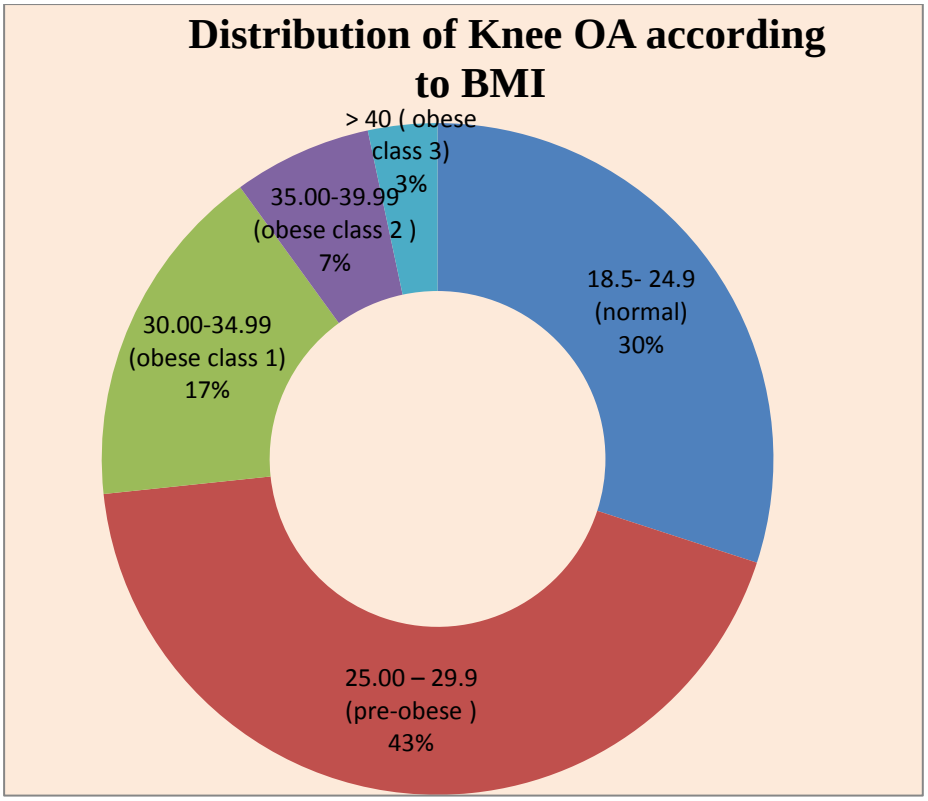


FINDINGS: The study shows that out of 30 patients suffering from OA knee 10 patients (about 33.33%) have backache, about 9 patients have diabetic mellitus (30%), 4 patients (13.33%) have hypothyroidism, 2 patients have both diabetic mellitus and hypothyroidism (6.66%) and 1 patient have gastritis 3.33%.

5.8 DISTRIBUTION OF KNEE OA ACCORDING TO BMI

Table 5.8 Distribution of knee OA according to BMI

Sl.no	BMI (kg/m2)	No.of patients	Percentage
1.	18.5- 24.9 (normal)	9	30%
2.	25.00 – 29.9 (pre-obese)	13	43.33%
3.	30.00-34.99 (obese class 1)	5	16.66%
4.	35.00-39.99 (obese class 2)	2	6.66%
5.	> 40 (obese class 3)	1	3.33%



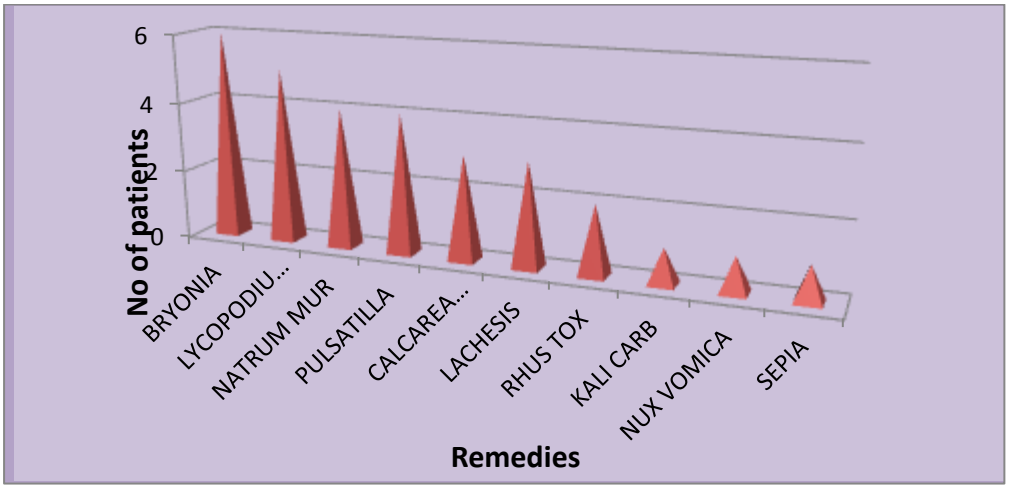
FINDINGS

Distribution of Knee OA according to BMI. 9 patients (30%) are normal weight. They have BMI between 18.5-24.99, 13 patient (43% cases) are preobese and the BMI is between 25.0 and 29.99. 17% cases are obese class 1 BMI between 30.0- 34.99. 2 patients (6.66%) come under obese class 2 (BMI between 35.00 - 39.99). 1 patient (3.33%) out of 30 come under obese class3 (BMI above 40).

5.9 DISTRIBUTION OF OSTEOARTHRITIS OF KNEE ACCORDING TO THE REMEDY GIVEN

Table 5.9 Distribution of OA knee according to the remedy given

Sl.no	REMEDY	No. of patients	Percentage
1.	BRYONIA	6	20%
2.	LYCOPODIUM	5	16.66%
3.	NATRUM MUR	4	13.33%
4.	PULSATILLA	4	13.33%
5.	CALC CARB	3	10%
6.	LACHESIS	3	10%
7.	RHUS TOX	2	6.66%
8.	KALI CARB	1	3.33%
9.	NUX VOMICA	1	3.33%
10.	SEPIA	1	3.33%



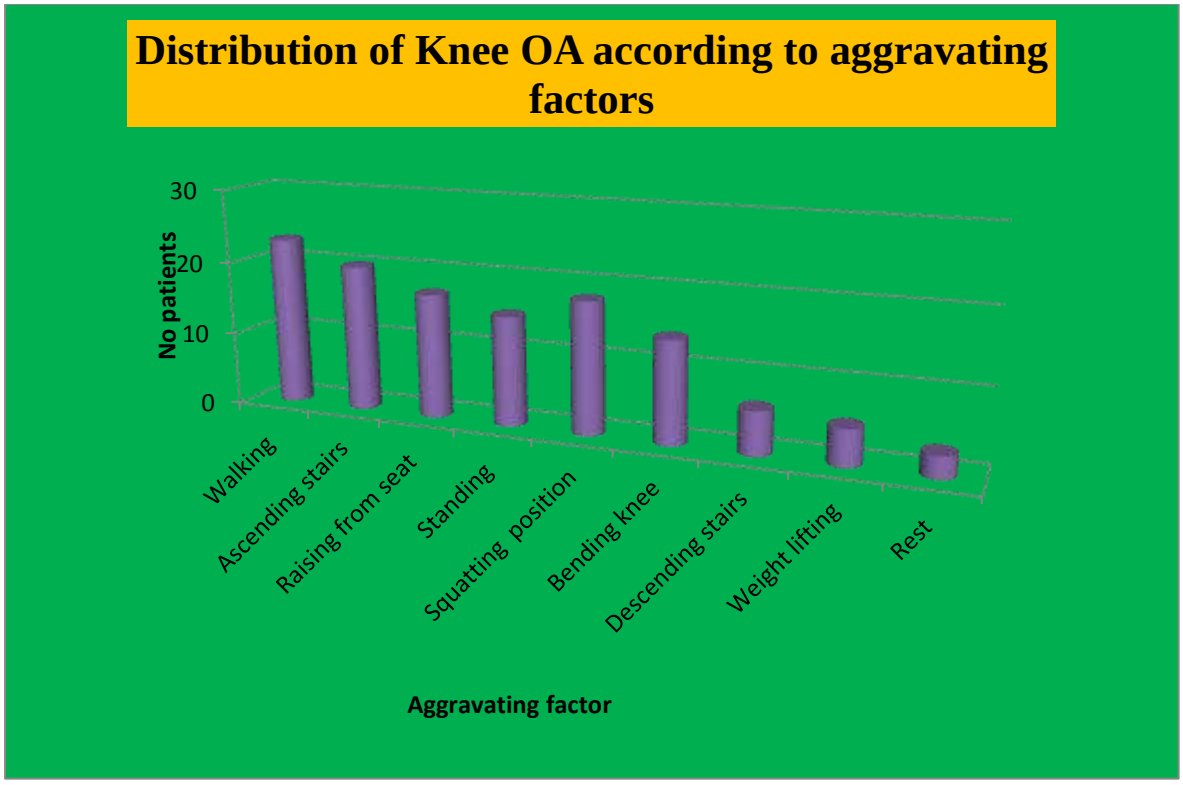
Findings: Out of 30 cases 6 cases (20%) were given Bryonia, Lycopodium was given 5 cases(16.66%), Nat mur in 4 cases (13.33%), Pulsatilla 4 cases (13.33%) Cal carb 3

cases (10%), Lachesis in 3 cases (10%), Rhus tox in 2 cases (6.66%), Kali carb, Nux vom and Sepia for one case each(3.33%)

5.10 DISTRIBUTION OF KNEE OA ACCORDING TO THE COMMON AGGRAVATING FACTORS

Table 5.10 Distribution of Knee OA according to common aggravating factors

Sl. no	Aggravating factors	No. of patients	Percentage
1.	Walking	23	76.66%
2.	Ascending stairs	20	66.66%
3.	Raising from seat	17	56.66%
4.	Standing	15	50%
5.	Squatting position	18	60%
6.	Bending knee	14	46.66%
7.	Descending stairs	6	20%
8.	Weight lifting	5	16.66%
9.	Rest	3	10%



FINDINGS:

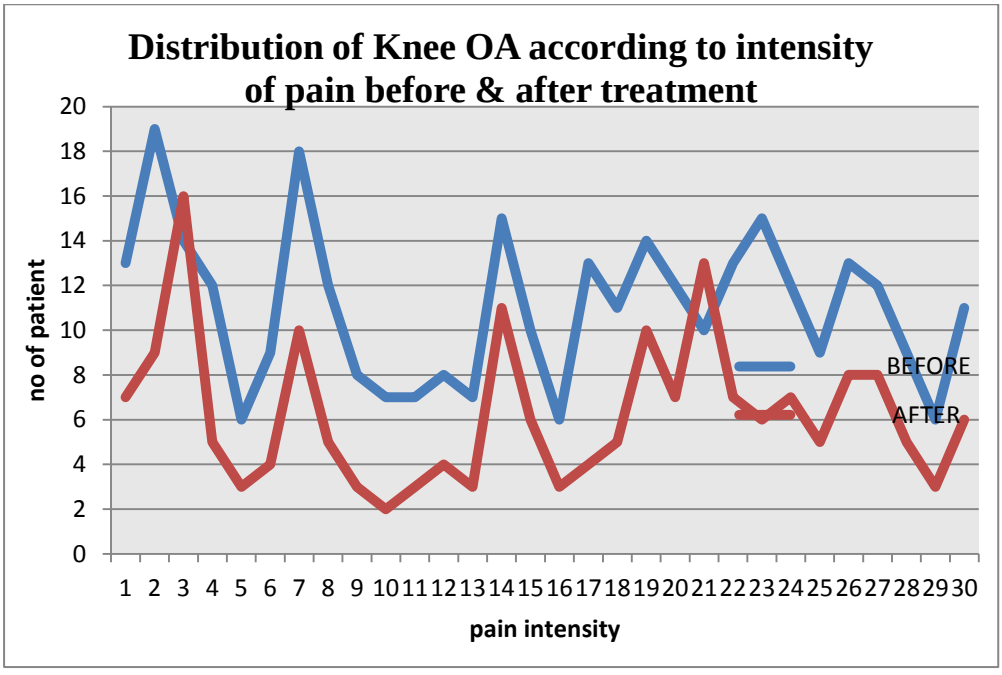
out of 30 patient 23 patient (76.66%) had aggravation during walking , 20 patient (66.66%) has aggravation during ascending stairs, 17 (56.66%) patient aggravation during raising from seat, 15 (50%) aggravation during standing, 18 patient (60%)had aggravation squatting position, 14 patient (46.6%) aggravation bending knee, 6 patient (20%) aggravation descending stairs, 5 patient (16.6%) aggravation weight lifting and 3 patient (10%) had aggravation rest.

5.11 DISTRIBUTION OF KNEE OA ACCORDING TO THE INTENSITY OF PAIN BEFORE AND AFTER TREATMENT

Table 5.11 Distribution of knee OA according to pain before and after treatment

Sl. no	BEFORE	AFTER
1.	13	7
2.	19	9
3.	14	16
4.	12	5
5.	6	3
6.	9	4
7.	18	10
8.	12	5
9.	8	3
10.	7	2
11.	7	3
12.	8	4
13.	7	3
14.	15	11
15.	10	6
16.	6	3
17.	13	4
18.	11	5
19.	14	10
20.	12	7

21.	10	13
22.	13	7
23.	15	6
24.	12	7
25.	9	5
26.	13	8
27.	12	8
28.	9	5
29.	6	3
30.	11	6



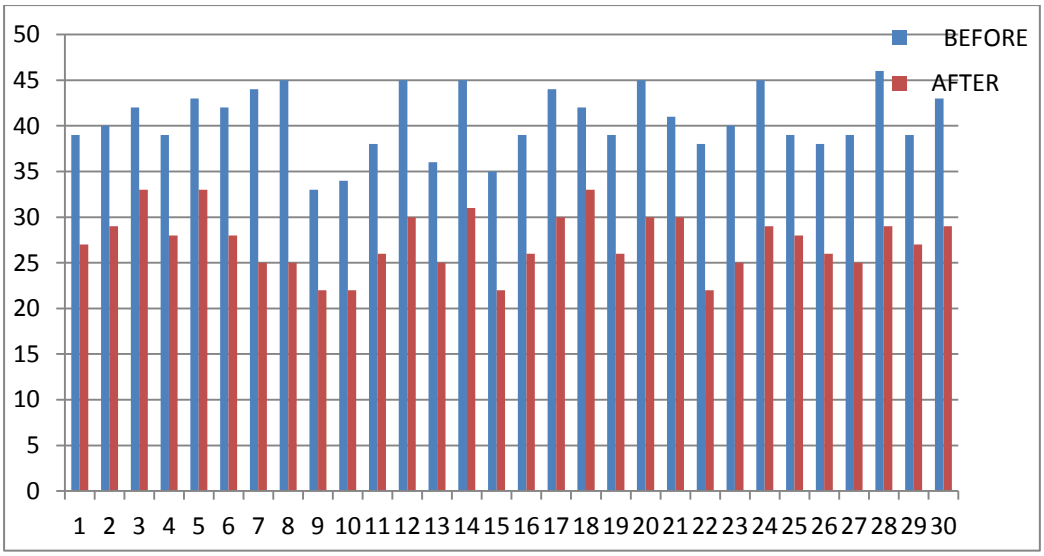
FINDINGS: As shown in the study most of the cases got the improvement in pain intensity.

5.12 DISTRIBUTION OF ADL SCORES BEFORE AND AFTER THE HOMOEOPATHIC MEDICATION

Table 5.12 Distribution of ADL score before and after the Homoeopathic medication

Sl. no	BEFORE	AFTER
1.	39	27
2.	40	29
3.	42	33
4.	39	28
5.	43	33
6.	42	28
7.	44	25
8.	45	25
9.	33	22
10.	34	22
11.	38	26
12.	45	30
13.	36	25
14.	45	31
15.	35	22
16.	39	26
17.	44	28

18.	42	33
19.	39	26
20.	45	30
21.	41	30
22.	38	22
23.	40	25
24.	45	29
25.	39	28
26.	38	26
27.	39	25
28.	46	29
29.	39	27
30.	43	29



FINDINGS: As shown in the study most of the cases got the improvement in ADL Score.

7.0 DISCUSSION

Osteoarthritis (OA), a chronic degenerative joint disease, characterized by focal loss of articular hyaline cartilage with proliferation of new bone and remodelling of joint contour. This study was conducted in the patients who attended the IPD, OPD and the rural health centres of Saradakrishna Homoeopathic Medical college, Kulasehkaram. The above the age of 40 are selected for the study. Both the sexes are included and there cases were taken as per inclusion criteria.

A total of 30 cases which are diagnosed as knee OA were taken for the study and the assessment of clinical status before and after treatment was done by ADL scoring criteria. For the statistical analysis paired 't' test was applied.

AGE: From this study out of 30 patients 3 patients (10%) are between the age of 40 years to 45 years, 4 patients (13.33%) the age of 46 yrs to 50 ys. 7 patients (23.33%) are between the age of 51 yrs to 55 yrs. 10 patients (33.33%) between the age of 56 yrs to 60 yrs. 3 patients (10%) between the age of 61 yrs to 65 yrs, 1 patient between the age of 66 yrs to 70 yrs. And 1 patient comes under 70-75 yrs of age group. Maximum age group of people come under 56yrs to 60yrs. Osteoarthritis is an degenerative disease which affects the elder age groups.

SEX: In this study of 30 cases it shows the 21 patients were females (70%) and 9 patients were males were (30)%. The sex incidence of female are more affected than males. In my study the female male ratio is 3:1. Effect of homoeopathic treatment on activity of daily living in knee osteoarthritis : A prospective study 82 % percent of females were found to have knee OA.

PREVIOUS OCCUPATION : Out of 30 cases, 60%(18) belonged to housewives, 16.66% (5) belonged to the category of manual labourer, 6.66% (2) belonged to the category of fisherman, 3.33% (1) of rubbertapping, 3.33% (1) of tailor, 3.33% (1) of field worker, 3.33% (1) of policeman and 3.33% (1) of bus conductor. Most the patients affected are housewives and manual labours.

PAST ILLNESS

As shown by studies the history of past illness out of 30 patient, 12 of them (40%) had a past history of chikungunya, 5 of them hysterectomy (16.66%) done. 2 of them about (6.66%) had history of trauma. 2 of them (6.66%) had history of dengue fever. The study observed that most of the people who had affected with chikungunya had high prevalence to get degenerative disease. Also those who done hysterectomy also prone to degenerative diseases.

COMORBID ILLNESS:

The study shows that out of 30 patients suffering from OA knee 10 patients (about 33.33%) have backache, about 9 patients have diabetic mellitus (30%), 4 patients (13.33%) have hypothyroidism, 2 patients have both diabetic mellitus and hypothyroidism (6.66%) and 1 patient have gastritis 3.33% and 1 have bronchial asthma. These complaints were not the primary complaint of the patient and were reveal while interrogation with the patient.

DURATION OF ILLNESS: In this study of 30 patients 10 patients (30%) gave a suffering history for 1-2 years. 8 patient (26.66%) gave history of illness for 2-4 years. 4 patient (13.33%) gave the suffering history for 4-6 years. And 5 patient

(16.66%) have a duration of complaint for 6-8 years and remaining 3 patient (10%) had duration of 8-10 years.

This clinical study shows the distribution of knee OA in 30 cases according to the duration of illness. 30% gave suffering history for 1-2 years. 26.66% gave history of illness for 2-4 years. 13.33% gave the suffering history for 4-6 years.

BMI : out of the 30 patients 13 patients (43% cases) are preobese and the BMI is between 25.0 and 29.99. 5 patients (17% cases) are obese class 1 BMI between 30.0-34.99. 2 patients (6.66%) come under obese class 2 (BMI between 35.00 - 39.99). 1 patient (3.33%) out of 30 come under obese class3 (BMI above 40). Only 30% cases are normal weight and about 70 % of the patients are preobese or obese people. The incidence of diseases of osteoarthritis of knee is high in patient having obesity.

AGGRAVATING FACTORS:

Out of 30 patients 23 patients has pain < walking, 20 have < during ascending stairs, 18 have < during squatting position, 17 have < during raising from seat.

REMEDIES INDICATED :

Among 30 cases the medicine is selected on the basis of totality of symptom. In 23 cases show improvement of activities of daily living but 7 cases pain not relieved and in such cases there activities of living also not improved. Bryonia and Lycopodium are the most indicated medicine in my study. And the other remedies indicated are Natrum mur, Pulsatilla, Calc carb, Lachesis, Kali carb and Sepia.

8.1 LIMITATIONS

- Number of the cases were small only 30 cases. So generalization of the result and the inference of the study should be done cautiously.
- The area of population was restricted to kanyakumari and surrounding areas
- The improvement of the cases could not be followed for sufficient period since it is a time bound study.
- Selection of cases were difficulty since many of the cases were irregular and few cases even dropped out.
- There were no standard studies are done in homoeopathy human errors are expected.
- Follow ups were taken by various physician at various times hence proper recording of the symptoms with its real nature is difficult.
- There was no control group since the sample size was small.

8.2 RECOMMENDATIONS

- Bigger sample size with extended time of research would provide better results.
- It will be always scientific if control group would have been kept simultaneously to verify the effectiveness of treatment.
- Comparisons study between LM potency and other scale of potencies can be done.

CONCLUSION

A sample of thirty cases taken up at random for the study from patients who visited the IPD and OPD of Sarada Krishna homoeopathic medical college and hospital were selected as per the inclusion criteria. Conclusions were made after a statistical analysis of cases with osteoarthritis. The following conclusions were drawn from the study of 30 case samples:

- The prevalence of osteoarthritis knee is more in females than males.
- Osteoarthritis of knee has more preponderance to occur in housewives and manual labours.
- In this study its found that people who got chickenguniya previously and those having trauma history also have done hysterectomy had more risk to get osteoarthritis of knee .
- The patient having high BMI have more prone for osteoarthritis of knee.
- The medicines which are found to be more effective in improving the activities of daily living and management of pain include Bryonia, Lycopodium, Calcarea carb etc.
- Homoeopathic medicines have efficacy in improving activity of daily living and also in managing pain in osteoarthritis of knee joint.

SUMMARY

A sample of 30 cases from the patients who visited Sarada Krishna Homoeopathic Medical College and Hospital OPD and IPD were selected randomly as per the inclusion criteria. The prescription was made based on the symptom similarity. The cases were followed for a period of three weeks. The study was subjected to statistical analysis and results were made from the observations. Homoepathic medicine found to be more effective in the management of pain and improving the activities of daily living in osteoarthritis of knee joint.

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APPENDIX- I

GLOSSARY

1	REMEDY	A medicine or treatment for a disease or injury.
2	SIMILLIMUM	The remedy indicated in a certain case because the same drug, when given to a healthy person, will produce the symptom complex most nearly approaching that of the disease in question.
3	POTENCY	The power of something to affect the mind or body; the number of times a remedy has been diluted & succussed, taken as a measure of the strength of the effect it will produce.
4	REPERTORIZATION	The process of Repertorization is essentially a logical elimination of apparently similar medicines. It starts with a broad choice and narrows down the field, which provides us an adequate and a small group of similar remedies, so that the final selection of the simillimum is made easier with the help of reference to Materia Medica.
5	CONCOMITANT	Symptoms that accompany the chief symptom but have no pathological relation to the chief complaint.

Appendix – II

CASE RECORD FORMAT

"Case records are our valuable asset"

SARADA KRISHNA

HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL

KULASEKHARAM, KANYAKUMARI DIST, TAMIL NADU- 629161

CHRONIC CASE RECORD

O.P. No: UNIT : Date:

Name:

Age: Sex: Religion: Nationality:

Name of father/Spouse/Guardian/Son/Daughter:

Marital status:

Occupation:

Family size:

Diet:

Address:

Phone No (Mobile):

FINAL DIAGNOSIS:

Homoeopathic	
Disease	

RESULT:	Cured	Relieved	Referred	Otherwise	Expired

2. **INITIAL PRESENTATION OF ILLNESS**		
PATIENT'S NARRATION (in the very expressions used by him/her)	PHYSICIAN'S INTEROGATION (details Regarding symptoms narrated	PHYSICIAN,S OBSERVATION

.

3. PRESENTING COMPLAINTS

LOCATION (tissues,organs,systems extensions & duration direction & frequency)	SENSATION & PATHOLOGY	MODALITY (>,<) & A/F (=)	CONCOMITANTS IF ANY

4. HISTORY OF PRESENTING ILLNESS:

5. HISTORY OF PREVIOUS ILLNESS

NO	Age/Year	Ilness, trauma, fright, burns, drug allergy(ies), operation(s), exposure(s), innnoculation, vaccination(s), serum, steroids, hormone therapy, antibiotics, analgesics, etc.	Treatment Adopted	Outcome

6. HISTORY OF FAMILY ILLNESS

7. PERSONAL HISTORY

A. LIFE SITUATION

Place of birth: Caste:

Socio- economic status:

Nutritional status:

Dwelling: Customs: Nature of Work:

Political Status:

Religion:

Educational status :

Marital status: Year of Marriage:

Family status:

Father: ; Mother: Siblings: Male: Children:

B. HABITS & HOBBIES

Food:

Addictions:

Sleep:

Artistic:

Games/Sports:

C. DOMESTIC RELATIONS

With family members:

With other relatives:

With neighbours/friends/colleagues:

D. SEXUAL RELATIONS:

Pre-Marital: Marital: Extra Marital:

Others:

8. LIFE SPACE INVESTIGATION

9. MENSTRUAL HISTORY:

A.Menses L.M.P: Amenorrhoea-Primary/Secondary

Cycle/Regularity &its Duration	Duration Of Menses	**FLOW**			
		Qty	Consistency &clots	Color & ododr	Stains &Acidity

CONCOMITANTS

BEFORE	AT START OF	DURING	AFTER

B.Previous History: Changes in Menstrual Cylce Menarche: Early/Late

Early Years (first 3-4 Yrs) Before Marriage: FMP:

After Pregnancy(ies) Recent Complaints related to Meanrche

After Marriage

C. Climacteric:

Symptoms associated

Pre-Menopause	With Menopause	Post Menopause

D. Abnormal Vaginal Discharges (Leucorrhoea/Lochia)

Type	Qty	Onset Duration	Color Odour	Stains Acridity	Relation with menses	Modalities	Accompaniments	Obvious reason if any

10. OBSTETICAL HISTORY:

Gravida	Para	Abortion	Death	Live

A.Previous Pregnancies Including Abortion:

No	Age of Conception	Yr. Date and Period Of Pregnancy	Abnormalities in Pregnancy & Treatment Adopted	Labour Events	Mode Of Delivery	Nature Of Purperium

Child

Gender	Birth Weight	Condition of Birth	Congenital Abnormality	Viability	Cause of Death	Lactation History

B.Contraceptive method(s) adopted 1.Temproary (used/inuse/duration)

2.Permanent (changes of contraceptive method(s) and if so reason, any complaints from use)

C.Present Pregnancy: L.M.P Date of Quickening

E.D.C

H/O Morning sickness

Other Complaints

11. GENERAL SYMPTOMS:

A. PHYSICALS

I. FUNCTIONAL

1. Appetite :

2. Thirst :

3.Sleep :

4. Dreams

II. ELIMINATIONS

1. Stool :
2. Urine :
3. Sweat :
4. Breath
5. Discharges
6. Abnoraml Secretions & Excrertions

III . REACTIONS TO

REACTIONS TO	**Aversions**	**Desire**	**Intolerance / Sensitive to**	**Aggravation**	**Amelioration**
Time					
Thermal					
Season					
Meterological					
Moon Phase					
Places					
Air/Fanning					
Clothing/Coverin					

g					
Bathing/Washing					
Food/Drinks					
Undigested Food					
Touch/Pressure					
Posture					
Motion					
Sleep					
Sex					
Spl.Senses					
Eliminations					
Menses					

IV . CONSTITUTIONAL

Physical Makeup	**Temperament**	**Thermal**	**Side Affinity**	**Sensation/Tendencies**

B. MENTAL GENERAL

1. Will & Emotions including motivations (Love, hat, anger, sadness, fear.fright, anxiety, suspicious, cause, modalities, state, aversion and cravings (excluding food & drinks,) etc.

2. Understanding and Intellect (perception, thinking, consciousness, decision, confidence, speech, motivation, cause, mental state)

3. Memory (Effect on Behaviour & functions)

12. PHYSICAL EXAMINATION

A) GENERAL

- Conscious :
- General appearance:
- General built and nutrition:

- Height
- Weight
- BMI
- Anaemia:
- Jaundice:
- Clubbing:
- Cyanosis:
- Oedema :
- Nails
- Gait
- Lymphadenopathy:
- Pulse rate: Resp rate: B.P:
- Temp
- Others

B.SYSTEMIC EXAMINATION

1.Respiratory system:

2.Cardiovascular system:

3.Gastro Intestinal system:

4.Urogenital system:

5. Skin and glands :

6. Musculoskeletal system

7.Central Nervous system:

8 . Endocrine:

9.Eye and ENT:

10.Others:

C.REGIONALS

13. LABORATORY FINDINGS

14. DIAGNOSIS

- Provisional Diagnosis :
- Differential Diagnosis:
- Final Diagnosis (Disease):

15 .DATA PROCESSING

A . ANALYSIS OF CASE

COMMON	UNCOMMON

B. EVALUATION OF SYMPTOMS/TOTALITY OF SYMPTOMS

C. MIASMATIC ANALYSIS:

	PSORA	SYCOSIS	SYPHILIS
Family History			
Past History			
Mind			
Body			

Miasmatic Diagnosis:

D. TOTALITY OF SYMPTOMS

E. HOMOEOPATHIC DIAGNOSIS

16 . SELECTION OF MEDICINE

A. Non Repertorial Approach

B. Repertorial Approach

a)Reprtorial Totality: (Selection of appropriate Repertory, Selection of symptoms for repertorisation, conversion of symptoms into corresponding rubrics for repertorisation)

No	Symptoms	Rubrics	Explanation	Page No

b) **Repertorial result:**

Medicine						

c) **PDF if any**

d)**Analysis of Reprotorial Result**

17. SELECTION OF POTENCY AND DOSE

A. Potency

B. Dose

18. PRESCRIPTION

19.GENERAL MANAGEMENT INCLUDING AUXILLARY MEASURES

A. General/Surgical/Accessory:

B. Restrictions (Diet, Regimen etc.):

Disease	Medicinal

20. PROGRESS & FOLLOW UP

DATE	SYMPTOM(S) CHANGES	INFERENCE	PRESCRIPTION

APPENDIX-3

FORM - 4 : CONSENT FORM (A)

INFORMATION FOR PARTICIPANTS OF THE STUDY

The title of my study is "A clinical study on effectiveness of homoeopathic medicine on osteoarthritis of knee using adl (activities of daily living) scores A clinical study on the homoeopathic management of ostheoarthritis of knee". The purpose of my study is To know the role of homoeopathic medicine in the treatment of osteoarthritis of knee joint. To know the most effective medicines in the treatment of OA Knee. The expected duration of subject's participation is from July 2017 to January 20.

The procedures include Patient presenting with osteoarthritis of knee in any of the OPD and Peripheral Health Centers of Sarada Krishna Homoeopathic Medical College & Hospital will be subjected to detailed case taking. Detailed case taking and recording of cases in standardized pre structured case record format. Clinical examination with investigations where-ever necessary. Erecting a totality of the case. Prescription will be based on the totality, with the aid of a suitable repertory (as per the case) after referring standard textbooks of MateriaMedica. Potency selection and repetition will be done according to the principles laid down in the Organon of Medicine 5th and 6th edition. Tabular representation of the observations. Pre-test and post-test assessment followed by statistical assessment will be done on monthly basis until symptom relief or for a period of 3-6months or till follow.

The benefits to the subjects or others, reasonably expected from research are (1)The participants are screened for having OA Knee (2) The participant he/ she will be given an awareness about the risk factors of OA Knee, (3)Thus study is a benefit not only to the participant but also to the society as a whole.

The records are maintained highly confidential. Only the investigator has the access to the subject's medical records. Participants' identity will never be disclosed at any time, during or after the study period or during publication of the research. Securely store data documents in locked locations and encrypted identifiable computerized data. All information revealed by the patient will be kept as strictly confidential. Free treatment for research related injury is guaranteed. Compensation of the participants not only for disability or death resulting from such injury but also for unforeseeable risk is provided, in case situation arises.

Contact for trial related queries, rights of the subject and in the event of any injury.

Investigator :

Dr. Rakendu M.D (P.G. Scholar)
Department of Practice of Medicine,
Sarada Krishna homoeopathic medical
college and hospital
Kulasekharam, Mobile no: 9809012398

Guide:

Dr.T. Ajayan

Professor & Head of practice of Medicine

Department of Practice of Medicine,

Sarada Krishna Homoeopathic Medical College,

Kulasekharam, mobile no:9443474941

There will not be any anticipated prorated payment to the subject for participating in the trial. The responsibilities to the participant in the trial are; they must disclose all about their complaints, participants must strictly stick on to the scheduled diet and regimen.

The participation is voluntary, that the subject can withdraw from the study at any time and that refusal to participate will not involve any penalty or loss of benefits to which the subject is otherwise entitled.

Signature of investigator:

FORM - 4 : CONSENT FORM (B)

Participant consent form

Informed Consent form to participate in a clinical trial

Study Title: "A CLINICAL STUDY ON EFFECTIVENESS OF HOMOEOPATHIC MEDICINE ON OSTEOARTHRITIS OF KNEE USING ADL (ACTIVITIES OF DAILY LIVING) SCORES "

Study Number:

Subject's Initials: **Subject's Name:**

Date of birth/Age:

Please initial

Box (Subject)

I confirm that I have read and understood the information sheet dated JULY 2017 for the above study and have had the opportunity to ask question. [ ]

I understood that my participation in the study is voluntary and that I am free to withdraw at any time' without giving any reason. Without my medical care or legal rights being affected. [ ]

I understand that the sponsor of the clinical trial, others working on the sponsor's behalf the Ethics Committee and the regulatory authorities will not need m permission to look at my health records both in respect of the current study and any further research that may be conducted in relation to it, even if I withdraw from the trial.

I agree to this access. However, I understand that my identity will not be revealed in any information released to third parties or published. [ ]

I agree not to restrict the use of any data or result that arise from this study

Provided such a use only for scientific purpose(s) [ ]

I agree to take part in the above study. [ ]

Signature (or Thumb impression of the subject/legally acceptable Representative:_____

Date _____/_____/_____

Signatory's Name: _____

Signature of the Investigator: _____

Study Investigator's Name: Dr Rakendu. M.D

Signature of the Witness_____ Date: _____/_____/_____

Signature of the Witness _____Date _____/_____/_____

ADL QUESTIONNARIES TO PATIENTS WITH OSTEOARTHITIS OF KNEE JOINT

Name of the patient: Age : Sex:

NO	SELF-REPORT QUESTIONNARIES	ADL DIFFICULTY SCALE		ADL DISSATISFACTION SCALE		ADL PAIN SCALE (VAS SCALE)	
		Pre test	Post test	Pre test	Post test	Pretest	Post test
1.	Walk on flat ground						
2.	Wash and dry body						
3.	Bend to pick up						
4.	Faucets on and off						
5.	In and out of transport vehicle						
6.	Dress oneself						
7.	Feed oneself						

NO	OBSERVER-REPORTED PHYSICAL MEASURES	SCORE	
		Pre test	Post test
1.	Pain on action motion		
2.	Pain on passive motion		
3.	Joint tenderness		
4.	Joint swelling		
5.	Walking ability		
6.	Observer global assessment		

The range of scores for ADL scales is 1 to 3. 1- indicates normal status, 2- improvement,3- no improvement. Pain measuring using visual pain intensity scale, 0 to 5. 0- indicates no pain, 1 – indicates slight pain,5- indicating worse possible pain.

VERBAL PAIN INTENSITY SCALE

SYMPTOMS	NO PAIN	MILD PAIN	MODERATE PAIN	SEVERE PAIN	VERY SEVERE PAIN	WORST POSSIBLE PAIN
PAIN	(0)	(1)	(2)	(3)	(4)	(5)

Appendix - IV

"Case records are our valuable asset"

SARADA KRISHNA

HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL

KULASEKHARAM, KANYAKUMARI DIST, TAMIL NADU- 629161

CHRONIC CASE RECORD

O.P. No:Y Unit:IIIB Date:13.10.17

Name: Mr.X

Age: 55Years, Sex: M, Religion: Hindu ,Occupation: tailor

Address: Tharavilai, Bethelpuram

Phone No (Mobile):75988871695

Sl.No.	Dt. of Admn.	Dt. of Disch	Dt. of Review	I.P. No.	Ward	Bed No.	Remarks
1							
2							
3							
4							
5							

FINAL DIAGNOSIS:

Homoeopathic	**Chronic Miasmatic Disease –syphillis**
Disease	**Osteoarthritis of right knee joint**

RESULT:	Cured	Relieved	Referred	Otherwise	Expired

1**. INITIAL PRESENTATION OF ILLNESS**	
PATIENT'S NARRATION (in the very expressions used by him / she) & PHYSICIAN'S INTERROGATION	PHYSICIAN'S OBSERVATION
I am having severe pain on my right knee Joint since 1 year . Since i am a tailor not able to do my work ,am very upset because of the pain,i want to get relieved from this pain. Complaint worses during exertion and weight lifting.	patient is moderately built, wheatish complexion , co-operative and is upset about his complaints.

2.PRESENTING COMPLAINTS

LOCATION	SENSATION	MODALITY	ACCOMPANIMENTS
LOWER EXTREMITIES Right knee joint (since 1 year)	Stitching pain	<walking++ <exertion++ <ascending stairs+ <hanging the legs >rest >pressure	Stiffness of the leg

3. HISTORY OF PRESENTING COMPLAINTS

Patient was apparently healthy 1 year back,he started to get pain on right knee occurs as part of his occupation as he is a tailor . Took allopathic medicine but only got temporary relief.now again he is having pain which increases when he exerts.

4.HISTORY OF PREVIOUS ILLNESS

42 years of Age – chickenguniya – Allopathic medication – Relieved

5.HISTORY OF FAMILY ILLNESS

Father – Diabetis mellitus

6.PERSONAL HISTORY

Place of Birth : Bethelpuram Dwellings : Bethelpuram

Religion : Hindu Occupation : tailor

Education : 8th std

Economic Status : Moderate

Social Status : Moderate

Nutritional Status : Moderate

Family Status : Nuclear

Father : Alive Mother : Alive Siblings : Male-3

HABITS AND HOBBIES

Food : Non-Vegetarian

DOMESTIC RELATIONS

With Family Members, Relatives, Neighbours, Friends, Colleagues: Good

7.LIFE SPACE INVESTIGATION

The patient hails from a moderate family at Bethelpuram. His childhood was uneventful,he is having 3 brothers,he has good relation with all. He studied upto 8th std and due to financial problem he cannot continue his higher studies .He got married at the age of 28yrs, he has 2 childrens, inital days he had financial difficulties, he could withstand everthing, so he learn tailoring and continue his job as tailor. Before 4 years he had a huge amount of financial loss as his neighbour cheated him.now he has much worries about his financial loss. Also he is tensed about his knee pain.

8.PSYCHIC FEATURES

- Anxious about the financial loss and his disease
- Easily angered
- Consolation amelioration
- Desires Company

9.PHYSICAL FEATURES

A. APPEARANCE:

Conscious
Moderate Stature
Dark complexion
Healthy
No deformity

B. REGIONAL NR

C. GENERALS

Appetite : Good

Thirst : Good

Sleep : disturbed

Stool : Regular

Urine : Normal

Sweat : Normal

- Desires hot season
- Desires Fanning
- Desires fish
- hydrogenoid
- melancholic Temperament
- chilly Patient

D.PHYSICAL EXAMINATION

i) **General**

- Jaundice: Not Icteric
- Anaemia: No pallor
- Oedema: Nil

- Cyanosis: Nil
- Clubbing: Nil
- Lymphadenopathy: Nil
- Height: 156cm
- Weight: 60Kg
- B.M.I: 25
- BP : 110/80 mm of Hg
- Pulse rate: 74/min
- Resp.rate: 18/min
- Temp: 98.6˚F

ii) **Systemic**

1. MUSCULOSKELETAL

- Inspection : No scar, No deformities, No swelling of knee joint
- Palpation : tenderness on right knee joint, crepitus heard on right knee joint.
- Range of movement: flexion and extention restricted and painful.

.

10.LABORATORY FINDINGS

On 21.09.2017-Blood R.E

ESR-30 mm

X-ray of knee joint- shows osteophyte formation,and reduction of joint space .

11. ANALYSIS AND DIAGNOSIS OF DISEASE

A. Provisional Diagnosis: Osteoarthritis of right knee

B. Differential Diagnosis:

Gout

Reactive arthritis

Final Diagnosis (Disease) : Osteoarthritis of right knee

12.ANALYSIS AND DIAGNOSIS OF THE PATIENT

COMMON	UNCOMMON
Desires Company, Desires Fanning Pain in knee joint <exertion <ascending stairs	Anxiety about financial loss Rt side affection Stitching pain >pressure < walking++ Desires – fish,warm food <night+

A. Evaluation of Symptoms/Totality of Symptoms:

- Anxious about financial loss
- Desires – fish.cold food
- Knee joint pain , right side < walking^{++}
- >pressure

A. Miasmatic Expressions:

PSORA	SYCOSIS	SYPHILIS
Anxious disease about Desires fish	Pain in knee joint >pressure Osteophyte formation	Degeneration of knee joint Pain in knee joint < motion Pain in knee joint < night

B. Final Diagnosis (Homoeopathic):

Chronic Miasmatic Disease - syphilis

13.MANAGEMENT& TREATMENT

A. Plan of Treatment:

Chronic Medicine – calc carb

intercurrent Medicine – Sulphur

Acute Medicine – Rhus tox

B. General/Surgical/Accessory:

Avoid over exertion,avoid sour food

C. Restrictions (Diet, Regimen etc):

Disease	Medicinal
Avoid over exertion, avoid weight gain]	Avoid coffee and other stimulants

D. Medicinal: First Prescription:

R_x

CALC CARB 200/1D

BASIS OF SELECTION

i) Medicine:
Knee joint pain Rt:side,>pressure,<exertion
<night,

16. PROGRESS & FOLLOW UP

30.10.17	Knee pain persists as same.<exertion Thirst normal Appetite normal Bowel bladder-regular		R_X 1. CALC CARB 200/1dose 2.SL 1-1-1 3.SG 3-3-3
21.11.17	Knee pain feels better Stiffness better Generals-good		Rx 1.SL 1-1-1 2.SG3-3-3
12.12.17	Knee pain better,no stiffness in the knee joint Generals good		R_X 1.SL 1-1-1 2.SG3-3-3
2.1.17	Knee pain better No stifffness Generals good		R_x 1.calc carb 200/1D 2.SL 1-0-0 3.SG3-0-3

21.01.18	All the complaints better knee pain better Generals good Knee pain better No other complaints Generals good Knee pain better No numbness Generals good		R_X 1.calc carb200/1D 2.SG 3-0-3 3.SL1-0-0 One week R_x 1.SL 1-0-0 2.SG 3-0-3 For 3 weeks R_X 1.SL-1D 2.SG3-0-3 3.SD 1-0-1 for 3 wks
14.01.2018			
13.02.16			

APPENDIX V

MASTER CHART

SL.NO	NAME	AGE	SEX	OCCUPATION	DURATION OF ILLNESS	PRESENTING COMPLAINTS	P/H	COMORBID ILLNESS	BMI	REMEDY	ADL SCORE		Pain score		REMARKS
											Bf	Af	Bf	Af	
1.	Mr .KS	52yr	M	Construction worker	9 month	Stitching pain in both knee joints < walking, flexion of knee	NR	DM	37	Bryonia 30	39	27	13	7	Improvement
2.	Mrs.E	57	F	Housewife	2 years	Pain in both knee joints more on right	NR	DM	26.9	Lachesis 200	40	29	19	9	Improvement
3.	Mrs. V	50	F	Housewife	1 year	Pain and stiffness in both knee joint<walking, squatting position, night > rest	Hysterectomy	Cervical spondylosis	26.5	Lachesis 200	42	33	14	16	No improvement
4.	Mrs .B	60	F	Housewife	1 year	Aching pain in both knee joint, <walking,raising from seat, prolonged standing, ascending stairs	NR	Gastritis	30.2	Lycopodium200	39	28	12	5	Improvement
5.	Mrs.A	56	F	Sweeper	7 years	Pain in right knee joint< ascending stairs, walking, raising from seat> warm application	Chikengunea 8	NR	24.4	Lycopodium200	43	33	16	14	No improvement

							years back								
6.	Mrs.L	60	F	Housewife	2 years	Pain in both knee joint <walking , morning ,raising from seat, night	NR	Hypothyroidism	35.5	Lycopodium200	42	28	9	4	Improvement
7.	Mr.S	55	M	Tailor	7 months	Stitching pain in right knee joint & odema present< ascending and desending stairs, hanging down the leg	NR	Cervical spondylosis	24.7	Calc carb 200	44	25	18	10	Improvement
8.	Mrs .F	48	F	Housewife	2 years	Pain & stiffness in both knee joint <walking, raising fom the seat.> pressure	NR	Bronchial asthma	41.1	pulsatilla 200	45	25	12	5	Improvement
9.	Mrs. R	43	F	Field worker	2 years	Aching pain in left knee & weakness < raising from seat, sitting >warm application	NR	DM	26.1	Nat mur 200	33	22	8	3	Improvement
10	Mrs. RN	56	F	Housewife	3 years	Burning pain in both knee joint<touch, walking, movements of leg, standing	NR	Lumbar spondylosis	27	Medorrinum 1m	34	22	7	2	Improvement
11	Mr .L.B	40	M	Painter	8 months	Drawing pain in left knee joint< hanging the legs, walking, evening >lying	Dengue fever 2 years	NR	27.1	Pulsatilla 200	38	26	7	3	Improvement

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12	Mrs WA	52	F	Housewife	3 years	Pain in both knee joint< standing, squatting position	NR	NR		Rhus tox 1m	45	30	8	6	No Improvement
13	Mrs . LA	55	F	Housewife	6 years	Pain in both more on right<bending knee, cold exposure	Chikengunea 10 years back	HTN	27.4	Pulsatilla 200	36	25	7	2	Improvement
14	Mr .SK	56	M	Autodriver	4 years	Pain in both knee joint< ascending stairs, night, continous walking	NR	DM	25.3	Lachesis 0/1	45	31	15	11	No improvement
15	Mrs SB	52	F	Housewife	1 year	Pain in both knee joint	NR	Hypothyroidism	24	Nat mur 0/1	35	22	10	6	Improvement
16	Mrs. ML	49	F	Housewife	3 years	Pain in right knee joint <walking, bending of knees, squatting position	Hysterctomy -4 years back	DM hypothyroidism	36.2	Nat mur 200	39	26	6	3	Improvement
17	Mrs VS	62	F	Housewife	1 year	Stiffness and bruised pain in both knee <squatting position ascending stais >pressure, warm application	h/o trauma	Lumbar spondylosis	29.9	Sepia 200	44	28	13	4	Improvement
18	Mr	75	M	Tapping	7	Pain in both knee joints	Chike	NR	23.9	Pulsatilla	4	33	11	5	No

	KD				months		ngunea			200	2				improvement
19	Mrs VD	57	F	Housewife	3 years	Pain in both knee joint	Chikengunea Hysterectomy	DM	28.5	Lycopodium0/1	39	26	14	10	Improvement
20	Mrs MS	60	F	Housewife	1 year	Pain in left knee joint<walking, ascending ,bending of knee	NR	Hypothyroidism DM	25.6	Nux vomica200	45	30	12	7	No Improvement
21	Mrs PV	45	F	Shop keeper	6 months	Pain in right knee joint	Dengue fever 2 Hysterectomy	Cervical spondylosis	22	Nat mur 200	41	30	10	13	No improvement
22	Mr. M	58	M	Retired conductor	2 years	Aching pain in both knee joint< raising from seat, standing >pressure, rest	NR	NR	24	Bryonia 200	38	22	13	7	Improvement
23	Mrs. S	57	F	Housewife	15 years	Pain in both knee joint	Hysterectomy 15 yrs	DM-10 yrs	26.3	Kali carb 200	40	25	15	6	Improvement
24	Mrs .P	52	F	Housewife	3 years	Pain in both knee joints< rest	NR	NR	30.1	Calc carb 200	45	29	12	7	Improvement

25	Mr. SP	55	M	Fisherman	5 years	Aching pain in both knee joint< flexion of knee, squatting position, physical exertion,raising from seat	Chikengunea	Hypertension	24	Bryonia 200	39	28	9	5	Improvement
26	Mrs. TM	65	F	Housewife	6 months	Aching pain in both knee joint< walking, raising from seat	Chickengunea	NR	30.2	Rhus tox 200	38	26	13	8	Improvement
27	Mr.MN	67	M	Coolie	5 years	Pain in both knee joint< walking, ascending stairs> sitting >during sleep	NR	Bronchial asthma	19.7	Bryonia 200	39	25	12	8	Improvement
28	Mr.DN	65	M	Police	6 months	Stitching pain in left knee joint< walking, intial motion, descending stairs> pressure, continous motion	NR	DM	23.1	Bryonia 200	46	29	9	5	Improvement
29	Mr .JJ	49	M	carpenter	9 months	Stitching pain in right knee joint< walking, ascending stairs, descending stairs> rest	Dengue fever-2yrs	NR	22.1	Bryonia 200	39	27	6	3	Improvement
30	Mrs.JT	58	F	Housewife	10 years	Aching pain in both knee joints<walking, prolonged standing, raising from sitting position >hard pressure	Chikengunea	Hypertension	31.4	Calc carb 200	43	29	11	6	Improvement